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OF  
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A JOURNAL PUBLISHED MONTHLY IN THE INTEREST OF  
MEDICINE AND SURGERY

J. J. CASSIDY, M.D., EDITOR.

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## *Original Contributions.*

### TREATMENT OF INJURIES OF THE GENITAL TRACT OF THE PARTURIENT WOMAN.\*

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BY J. F. W. ROSS, M.D., TORONTO.

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*Perineum and Pelvic Floor.*—The perineum is not *per se* a very important supporting structure. Support is mainly given by muscle and fascia. Each of these plays an important part. The pelvic floor is frequently injured and its function is impaired by child-bearing. The injuries done may be visible and invisible. The visible may be indicated by complete or incomplete lacerations. The invisible are due to a forcing apart of the fibres of the levator ani muscle, so that its function, as a pelvic diaphragm, is seriously interfered with. We have to deal now with the visible damage and to decide when and how it shall be repaired. Many remarkable cases of injury have been recorded, and it may be well to mention them. One foot has been forced out of the normal introitus and the other foot out of the anus. A head has been found pressing down on the perineum, while a hand protruded through the rectal outlet. A child has been delivered, not over, but through the perineal body. Such a rupture is called a central rupture. The main feature to be noticed in considering these tears is the presence or absence of damage to the sphincter ani—the one line of demarkation between complete and incomplete laceration. The sphincter ani is not frequently torn through when we consider that about 20 per cent. of all primipara suffer some damage to the perineum.

*Complete Tears.*—It has been my fortune or misfortune to

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\*Read at the meeting of Ontario Medical Association, June, 1905.

have met with a number of cases of complete perineal rupture. These have been both old and recent cases. My first experience was away in the country far from help, in very bad weather, with very muddy roads. I was pulling hard at an impacted occiput posterior head in the pelvis of a primipara, when suddenly the head slipped out, and I found that the perineum had given away like a piece of wet paper, and that the rent extended some distance into the rectum. With poor lamplight, the assistance of an untrained woman, a surgeon's needle and some ordinary sewing cotton, I repaired the parts by uniting first the rectal mucous membrane, then the vaginal mucous membrane, and then the main body of the perineum. Before inserting the sutures, the blackened and bruised tissues were carefully pared off with scissors, and the parts were thoroughly irrigated with warm water. Union took place by first intention and I have never seen a more perfect result. This case set me thinking and stood me in good stead later on. A brother practitioner, some miles from the city, was delivering his wife with forceps and tore the perineum into the rectum. It was many hours after the delivery before I arrived at the house. A proceeding similar to that outlined above was carried out. The black and bruised tissue was pared off. The rectal wall was repaired and at the end of three weeks the perineum was as complete as before the injury. The sphincter controlled the bowel perfectly. Some years after I was again called out of town to repair a perineum, torn completely during a difficult labor. Many hours had thus elapsed between the injury and its repair, but, notwithstanding this fact, union took place by first intention and we had a perfect result. With such a gratifying experience one is led into only one line of practice, namely, immediate operation. Why should we wait? We should not wait. Let us now look at the result of waiting. What happens? The pelvic floor is left in a damaged condition and we favor some downward displacement of a heavy uterus or relaxed pelvic structures. We leave the patient, if the rupture is complete, in a loathsome condition, suffering from incontinence of feces. I operated on one case that continued in such a condition for 18 years, and then only submitted to operation, after having passed successfully through an operation for the removal of gall-stones. The laceration was the worst I have seen. The rectum required isolation from a mass of cicatricial tissue before the old rent on its anterior wall could be closed. A slight leak occurred, subsequently, but by careful douching sepsis was warded off and a good result was obtained. Here the silkworm gut, as a suture, proved of great service. I have seen the entire wound reopen on the 9th or 10th day as a consequence of the too rapid absorption of the catgut ligature used. It is now conceded on all sides that the damage should be repaired,



and properly and thoroughly repaired, without delay. It requires the union of a very small amount of tissue in front of the rectum to obtain control of the lower bowel. But this tissue must be well banked up in front of the rectum after the mucous membrane has been united, in order to approximate the separated ends of the sphincter ani muscle. These ends need not be approximated exactly, so long as they are closely united in a body of scar tissue that will close up the circle of the sphincter, or, in other words, that will repair the elastic band that has been broken. The essentials of success are that we should have a non-capillary suture that can be rendered aseptic, is non-absorbable, and is strong enough to allow the very tight constriction of the tissues. By such a strong suture, we are enabled to draw the tissues of the pelvic floor firmly together and, in this way, to prevent wound infection. We must see to it that these sutures do not penetrate the rectal wall.

The rectal wall itself must be carefully sutured with absorbable or non-absorbable sutures, according to the fancy of the operator. The tissues must be well banked, as I have already stated, in front of the rectum, if we hope to obtain control of the bowel by the torn sphincter. We must endeavor to guess where the torn and retracted fibres of the sphincter are, and to approximate these points. A pair of forceps should grasp these deep structures so that they may be raised while the suture is passed deeply into them.

The bruised and blackened tissues must be pared off and continual irrigation should be used during the operation. The amount of pain is slight and the parts may be found to bleed freely at first, but the operator must not be alarmed. Suture pressure will soon stop all hemorrhage. Irrigation plays a very important part. It gives great protection to the patient. The wound is liable to be infected from the rectum or irritated with the urine, and such infection or irritation must be much lessened by the running water. The bowels should be moved daily by enema. It is bad practice to allow fecal matter to collect from day to day, until at last we have a very large formed stool to come through the recently repaired sphincter.

Urine should be drawn by glass catheter for two or three days, after which time it may be passed with safety, provided the parts are protected with some sterilized vaseline or zinc oxide ointment, and wiped off with sterilized gauze. When the laceration is not complete, the operation for its repair should be very complete. Unfortunately, insufficient attention is paid to this fact. Every obstetrician should carry a good perineum needle and some first-class silkworm gut. Much of the gut sold is not strong enough for this work. I always use a superior quality, and when tying it always use the first part of the surgeon's knot, so that the loop will not slip when it is tightened or until the second knot is tied.

In removing the sutures great care must be exercised. If a loop is left in the tissues much trouble may arise. I have seen patients annoyed for months by the presence of loops of silkworm gut in a restored perineum.

*Lacerations of the Vagina.*—The vagina may be lacerated below near its outlet, in the middle part of its course or at its uterine end. Lacerations at its lower end have a tendency to implicate the perineum. Lacerations are very frequently met with and are frequently overlooked. Large scars are often felt during an examination and these mark the situation of an old tear.

Laceration of the vagina at its middle portion is frequently produced by the use of those deadly weapons in unskilled hands, the midwifery forceps. If care is not exercised in performing craniotomy, the vagina may be torn either as a consequence of the instrumentation or from the passage of the unprotected bones of the fetal skull. The scalp should be left as intact as possible in such cases. As our instruction of students improves and their knowledge of the use of forceps is augmented, the percentage of vaginal tears will diminish.

After severe lacerations of the vagina, narrowing may occur, as a consequence of cicatricial contraction. The vagina may be so narrowed that coitus may be rendered almost impossible, and future labors extremely dangerous. Rupture of the middle portion of the vagina is not as serious as rupture of the upper portion. Here ruptures are usually due to extension downward of a cervical laceration, though they may occur independently of this. They may penetrate into the abdominal cavity, thus becoming to all intents and purposes similar to rupture of the uterus. They are then usually transverse. Labor pains do not cease so abruptly in cases of laceration of the vagina, as they do in cases of laceration of the uterus, and there is less hemorrhage and shock.

A complete separation of the cervix from the vagina may take place. I met with one transverse tear through the vagina produced by labor pains forcing a fetus against the vaginal fornix. Rupture finally occurred and the fetus was delivered into the abdominal cavity through the vaginal fundus. Attempted replacement of an inverted uterus has caused severe rupture of the vagina. A hematoma of the vagina may form during delivery, and may rupture. It will give rise to a condition similar to rupture of the vagina, but there will not be any prolapse of intestine.

Rupture of the upper portion of the vagina is a grave injury. Danyan records 13 deaths and 4 recoveries. McClintock records 38 deaths and 13 recoveries. These are the statistics of preaseptic days; with careful aseptic treatment this high mortality ought to be reduced.

*Treatment.*—Slight tears will unite or suppurate. It would be ideal surgery to cleanse and reunite the torn surfaces at the

outset, but the tissues are so bruised and gangrenous and soft that they will not readily hold sutures.

If there is hemorrhage, the indication will be to stop it. Many such ruptures, however, occur without giving rise to any symptoms and they are not recognized. If sepsis supervenes, the parts must be cleansed by frequent irrigation. If rectum or bladder are injured, they should be repaired.

In the presence of a post-partum discharge, it is impossible to treat such cases as one would treat an accidental laceration in a non-parturient woman. When a tear occurs into the *abdominal cavity*, the intestine must be replaced and must be kept up in its position. Good drainage must be instituted. To accomplish these ends, even in the face of a lochial discharge, we are forced to use a tamponade of iodoform gauze. The parts must be thoroughly irrigated before the gauze is introduced. Nothing is to be gained by opening the abdomen from the front. The drainage from below will be all that is required, and drainage through such a rent, with its edematous, gangrenous walls, is much more urgently needed than suturing.

*Tears of the Cervix Uteri.*—Small tears are very common, and may be looked upon as an inherent part of child-bearing. In some cases they constitute a serious injury that may be serious at the time or may give rise to trouble in the future. Tears of the cervix are usually bilateral, unilateral, or stellate. The connective tissue behind the uterus or the bladder or the parametrium itself may be implicated in the tear. The whole cervix has been torn off as a ring-shaped body.

Most of these lacerations heal perfectly by first or second intention, and they do not give rise to any further trouble. It occasionally happens that hemorrhage may be excessive. The insertion of a suture or forcible pressure will be all that is required to stop the bleeding. It is supposed that the opening of the parametrium admits of infection. If the vagina, at the end of labor, is the habitat of malignant germs, such lacerations are bound to be infected, but infection is liable to occur even if no laceration is present, and malignant germs are present in the vagina.

*Treatment.*—As most of these lacerations heal kindly, it is wise to leave them alone. The tissues, owing to the pregnant condition, are soft, and do not hold stitches well. The outlines of the cervix are somewhat vague and operation is not satisfactory. In the large majority of cases, if performed immediately, it will be performed unnecessarily. The patient will be still further disturbed at a time when she is badly in need of a well-earned rest.

I have now concluded my task. It was not intended that I should exhaust the subject or inflict upon you a long paper, but that I should open the discussion.

**A SECOND NOTE ON CASES OF SARCOMA OF THE NOSE.\***

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BY J. PRICE BROWN, M.D., TORONTO.

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THIS is merely a short continuation of a report which I had the honor of presenting to this Association two years ago, and which appeared in the transactions of that year. (Transactions, 1903, page 209.) It consisted of brief mention of two cases of nasal sarcoma, which had previously been treated, and a longer report upon a more recent case.

In the first, that of Mr. A. V. P., it is ten and a half years since I operated upon him. His weight was then 130 pounds. He is now 31 years of age, weighs 170 pounds, and reports himself as perfectly well. His only complaint is that the right nasal passage, from which the growth was removed, is always so open that it sometimes becomes dry; while the slightest cold will block up the left passage so effectually that he cannot breathe through it.

The second case, it may be remembered, occurred in a Mr. B., a stoker, aged 50 years. The growth was on the left side of the perpendicular plate of the ethmoid. Like the previous case it was removed by electro-cautery operations, and was reported nine months after treatment was completed. Both cases had been pronounced sarcoma after careful microscopical examination, and both, before operation, had been subject to severe recurrent hemorrhages. On Saturday last, Dr. Cleland, the family physician, at my request, sent Mr. B. over to my office for examination, and I find that after a lapse of two years from my last report, or two years and nine months after operation, there has been no return whatever either of hemorrhage or of the growth.

It is of the third case, however, that I desire to speak a little more fully. To briefly recapitulate, the patient, Mr. L. P., was 21 years old when I saw him. Three years before that time he became subject to hemorrhages from a tumor in the left nostril. This was found, upon microscopical examination, to be round-celled sarcoma. External operation was advised, but declined. Finally he consulted me, and in my former paper I described his condition, the treatment, and the result, at the same time showing pathological specimens, of the weight of over two ounces, which I had at different times removed through the left nasal passage, the largest piece, after evulsion by cold snare, weighing nearly three drams.

When I reported the case, the man had recovered from the

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Read at the annual meeting of the American Laryngological Association, at Atlantic City, June 2nd, 1905.

operations, was strong again, the nasal passage and naso-pharynx were both clear, and he had been working at his business in an office for a number of weeks.

During this discussion several gentlemen criticized so early a report of the case. So, when asked by our secretary to present a short paper upon cases in practice, at this meeting, I did not think I could do better than give a second note upon this one.

In doing so I would lay stress upon the fact that, although the original tumor was attached to almost the whole length of the left middle and lower turbinal regions, also the vault, the perpendicular plate of the ethmoid and the vomer, these parts were entirely freed by successive electro-cautery operations; and that, except upon the left ala of the vomer, there has not been any return. In the basillar region, however, over the spheno-occipital union, the inner surface of the inner ptergoid plate, and the ala of the vomer, the site from which the large solid portion of the tumor had been removed by snare, there has been repeated recrudescence, and a continued fight between the operator and the disease from then until now. Two months after our meeting in Washington, the growth commenced to develop again at the upper and back part of the left nasal fossa, extending backward somewhat into the region of the naso-pharyngeal vault. This spot agrees very closely with the one mentioned two years ago by Dr. Myles, when discussing the cases of Dr. Simpson and myself. He spoke of a small cartilaginous mass, which formed in some cases at the junction of the sphenoid with the basillar process of the occipital, and which might possibly be the point of origin of these malignant growths. This theory, although reasonable, could scarcely apply to this case, for, although the growth became enormous, it never covered the right side of the spheno-occipital suture.

The extent of area which the new growth covered in July, 1903, seemed to be about an inch square, and when discovered was again growing rapidly, the patient feeling quite well and entirely unconscious of the change. Through the wide nasal cavity, however, it could be distinctly seen, and also by means of the post-nasal mirror. It had a bright red appearance, was dense on pressure, and yet would bleed when touched by the probe.

As there was ample room for examination and treatment through the nasal passage, I concluded, upon the earnest wish of the patient, to continue the contest upon the old lines, believing then, as I believe now, that the growth was entirely confined to the soft tissues, any osseous involvement being in the nature of pressure absorption.

So, after an adequate application of solutions of cocaine and adrenalin, I made a succession of cuts into the growth with the

electro-cautery point at a bright red heat. There was some hemorrhage at the time, but it ceased before leaving the office.

I will not weary you with a detailed account of the next series of operations, but will simply say that from July 5th to October 31st, 1903, I used the electro-cautery twenty-nine times in a similar way. This was upon an average of nearly twice a week. Of this series of operations, only the last one was attended by hemorrhage severe enough to require plugging. I attribute this to the immense advantage which adrenalin affords, and to the care and exactitude with which the electro-cautery work was done. At the same time the growth of the tumor was so rapid that fewer operations at longer intervals would not have succeeded so well. With this last effort the disease seemed to be entirely removed again, and operative treatment ceased.

Four months later, however, in February, 1904, it suddenly reappeared in the same old site, and for several weeks grew with more rapidity than I could control by means of the electro-cautery. It was too sessile to be seized by a snare. So on March 31st, under chloroform anesthesia, I entered through the nose and naso-pharynx a large section of the basic tumor away. Still, from difficulty of access to instruments I could not get it entirely removed. The hemorrhage was enormous, and to check it I packed the huge cavity through the post-pharynx with large pledgets of absorbent cotton. The posterior naris on that side was so large that the packing filled the nose before the bleeding ceased. This, unfortunately, was followed by extensive ecchymosis over the eye, nose and cheek. The eyeball escaped, but the lids became badly swollen and two days later were covered with blebs. Absorption, however, quickly took place, and in two or three weeks the discoloration had disappeared.

Two weeks after the operation, when able to come to my office, I found that there was still a segment of the tumor left, and it took occasional burnings until June 25th to destroy it. During the next nine months, or up to March of the present year, there was very little return of the growth. On only three occasions during that time did I require to singe the granulations with electricity in the sphenoidal region.

Three months ago, however, recrudescence began to show itself vigorously upon the internal surface of the inner pterygoid plate, and from that date until May 26th, at intervals of a week, I have applied the electro-cautery about twelve times, and on each occasion as thoroughly and extensively as I deemed safe. Now it seems to be well under control again, the nasal passage and the vault both being clear of abnormal tissue. It is useless to believe that the battle is over, but the contest is still worth pressing, and I think the odds are again in favor of the patient.

There are several objective points, of which he handed in a report a week ago, that may be of interest.

Five months after presenting his case to this Association, he commenced attending a school of telegraphy. Seven months later, or one month after the operation under chloroform, of March 31st, 1904, he took a situation in the G. N. W. Telegraph office on day work. This he occupied for six months. Then he was transferred to night work. During the whole of this time, over a year now, he has worked eight hours in each twenty-four, and, notwithstanding the operative treatment, has only lost three days' time. His physical health is very good, and he says that the operations have caused very little inconvenience and scarcely any pain. He never was so heavy in his life, his present weight being 145 pounds.

In closing, I want to plead more earnestly than ever for electro-cautery treatment of sarcoma of the nose. Although in this case the latter indications have all been at the junction of the posterior naris with the naso-pharynx, three-fourths of the original tumor was within the nose and attached therein; and it is this fact that has enabled me to keep it under control through the wide nasal chamber in its successive developments during the past two years, attacking it vigorously whenever it made its appearance, without injury to the surrounding healthy tissues. Another point worthy of mention also is the comparative painlessness of sarcomatous tissue. Week after week, this young man has come to my office about 4 p.m., submitted to an operation, returned home for tea, gone to his office at 6 p.m., and worked until 2 a.m. For the ensuing week I would not see him, but the daily routine of work would continue, until he would turn up smiling for the next seance, the only home treatment prescribed being a spray at intervals of one of the hydro-carbon oils.

**MYELOID SARCOMA OF THE FEMUR: AMPUTATION AT THE HIP JOINT: SECONDARY GROWTH IN THE LUNGS.\***

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BY A. PRIMROSE, M.B., C.M. (EDIN.), M.R.C.S. (ENG.).

Professor of Anatomy and Associate Professor of Clinical Surgery in the University of Toronto, etc.

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THE patient was a lad 20 years of age, who first complained of trouble in the right thigh and leg four months before he came under my care. Pain at the knee and ankle were the first indications of anything amiss, and subsequently a slight, somewhat tender swelling above the knee. He continued his work as a student at the School of Practical Science, however, and was able to take his examinations in April. I saw him immediately after this for the first time in consultation with Dr. Todd. I found a fusiform growth situated at the lower end of the right femur, most prominent in the upper part of the lowest third of the bone. At the level of greatest prominence the circumference of the right thigh was one inch larger than the circumference of the left thigh at the same level. There was some tenderness on pressure over the growth, and also over the whole length of the femur. The right leg, at the most prominent part of the calf, was half an inch smaller in circumference than the left leg. His temperature was normal and his pulse 88. He was thin and anemic, and had a somewhat hectic look. I strongly suspected sarcoma, but I could not positively exclude chronic osteomyelitis of tuberculous origin.

The patient was kept at rest for a week with the right limb on a splint, and then came into hospital for operation. The night before operation, whilst turning in bed, he experienced a sharp pain at the seat of the growth, and subsequently it was found that the bone had been fractured at that point. Under an anæsthetic the growth was cut down upon. Its limitations did not appear well defined, but the periosteum was undoubtedly involved in it, and a piece of this tissue was removed for microscopic examination. Under this periosteal covering there was a thin lamella of roughened bone through which the forceps crashed readily, and which even on pressure of the finger exhibited "egg shell crackling," giving way with the application of slight force. The expanded medullary cavity of the bone was filled with soft vascular material, which resembled granulation tissue, but was less firm and evidently very cellular. The femur had been fractured through the growth. There seemed little doubt as to the nature of the growth, but I had promised to make a preliminary investigation before amputating at the hip, and accordingly a

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\*Read before the Pathological Society of Toronto.



piece of the tissue was sent to the Pathological Laboratory, where it was found to be a very cellular, large, round-celled sarcoma, with many multinucleated cells (myeloblasts) here and there in the section. The diagnosis of myeloid sarcoma having been made, we proceeded after three days' interval to perform amputation at the hip joint. The method employed was the "anterior racket operation." The femoral artery was first tied, and then the flaps made, and the limb removed with the minimum loss of blood. This is not the place to discuss the method of amputation at the hip, but let me say in passing that one cannot understand why this simple method is not more universally employed. It is infinitely superior to any other method in my opinion. The patient loses much less blood than in Wyeth's so-called "bloodless" method. Lister long ago pointed out that the pressure of a constricting ligature around a limb so paralyzed the vaso-motor nerves that the subsequent oozing from numerous small vessels which failed to contract was very great, and the amount of blood lost after amputation at the hip, where such an enormous raw surface is produced, results in the loss of a very large amount of blood after the patient has left the operating table. Such is the case where constricting agents are used to control hemorrhage during the operation; but by the operation which I am advocating no such constriction is employed. I am sure there was not more than an ounce of blood lost during the operation, and the amount of oozing subsequently was very slight. The patient made an excellent recovery from the operation, and went home at the end of the third week with the wound entirely healed. For a time his general health improved, but during the early summer it was seen that he was failing, and he had a distressing cough. He died a little more than three months after the operation, and the post mortem showed that extensive secondary growths had occurred in the lungs. There had been no recurrence in the stump.

The microscopic section made of the tumor shows it to be a typical myeloid sarcoma. Sections were also made of the secondary growths in the lungs and in the mediastinal glands. In both of these localities the tumor presented the characteristic myeloid sarcomatous structure. These secondary growths were exceedingly vascular, and show evidence of rapid cell proliferation.

# *Selections, Abstracts, Etc.*

## REMARKS ON THE USE OF THE ANESTHETIC, SOMNOFORM.

BY WILLIAM L. HESS, M.D., DENVER, COLO.

SOMNOFORM is a new anesthetic that was originally introduced into dental surgery as a safe and efficient anesthetic for short operations. It was first described several years ago by Dr. G. Rolland.

He gives the formula of somnoform as follows: Chloride of ethyl, 60 per cent.; chloride of methyl, 35 per cent.; bromide of ethyl, 5 per cent.

These constituents are each known as efficient anesthetics, but by this happy combination a mixture called somnoform has been elaborated that surpasses in its qualities the combined good qualities of each of its individual components. It is far superior to nitrous oxid gas as a short, safe anesthetic in that it has a shorter period of induction of anesthesia, generally thirty seconds or less, and has a period of real anesthesia from one to three minutes, which is two to four times as long as "laughing gas."

Somnoform conforms exactly to the physiologic laws for anesthesia, that is, it produces its effects within fifteen seconds after inhalation—the time it takes a red blood corpuscle to make the complete circuit of the body from the left ventricle and through the arterial and venous system, back to the lungs. It is eliminated in the same proportion of time it takes the blood to become purified.

Somnoform was first advocated as an anesthetic for the dental surgeon, but lately I have become attached to it as a ready anesthetic for short operations upon the upper respiratory tract. It is easily administered and leaves no bad after effects. It only requires a special inhaler, which allows it to be given in the manner of ether anesthetization. If the operation should by chance have to be prolonged even up to ten minutes, the anesthetic can be renewed when the signs of consciousness return. No bad after effects are seen except when we push the anesthetic too rapidly, when slight nausea may occur.

I have used somnoform in sixty-two operations, including two enucleations, the remainder being adenoid operations, opera-

tions for the relief of deviated septa, hypertrophied turbinates, enlarged tonsils and incisions of the ear-drum. The results have been uniformly satisfactory; excepting in one case of enucleation of the eye the reflexes could not be completely subdued. In operating for adenoids and dissections of the tonsils, the anesthetic has generally to be repeated on account of the prolonged nature of an operation of this kind. During the period of analgesia, which is about twice as long as the anesthesia, the patient will obey the command of the operator, but will feel no pain and will have no recollection of events occurring during this period.

Sommeform can be used in a great many of the minor operations in which it is desirable to avoid shock and pain and which require from a second to a minute or two for their completion. It is especially to be recommended in operating upon the upper air passages, because no asphyxia is developed; none of the suffocating feeling which nitrous oxid gas produces; no cyanosis, no stertorous breathing, and rarely jactitation of the limbs of the patient. It is especially well borne by children because it acts quickly, and the narcosis is lasting. It is readily absorbed and as readily eliminated; the dose being 5 c.c. and in children usually about 3 c.c. With strong men it must be given in increased amounts. The same is true of alcoholics. In complicated heart and kidney troubles, where ether or chloroform would be contra-indicated, Dr. Rolland has demonstrated that sommeform is well borne.

The following rules will illustrate the method of using this gas, which is administered better with the De Trey Inhaler, as much of the drug, being so volatile, becomes wasted in using the ordinary cone. When adapting the face piece, request the patient to breathe deeply and regularly, to keep the eyes open and to follow the movements of the index finger of the right hand, which should be slowly moved from side to side. After a very short space of time, it will be noted that he fails to do so. At this point, if a short narcosis is wanted, remove the face piece.

The indications of complete anesthesia are the complete flaccidity of the arms, although several cases have been reported where there was complete rigidity of the muscles during the anesthesia; drooping eyelids, dilated pupils, and quiet, snoring breathing. The conjunctival reflex, though usually absent, cannot be relied upon. As a rule, complete anesthesia is obtained only when a patient has made from twelve to fifteen inhalations. With children, six to eight inhalations will be ample.

Dr. Rolland found in experiments upon animals that the respiration ceases before the heart's action becomes impeded, consequently a close watch should be kept on the respiration, and the usual precaution of having the hypodermic syringe ready should be observed.

This agent should appeal to those who want a short anesthesia, as the patient is generally in an upright position and can walk out of the chair in a few minutes after the operation, very rarely with any bad after-effects, and usually with a recollection of having had a pleasant dream and with a feeling of gratitude toward his physician.—*Colorado Medicine*, May, 1905.

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### GONOCOCCUS INFECTION IN CHILDREN.

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ONE of the difficulties constantly occurring in children's hospitals, orphans' homes and other like institutions, is that outbreaks of this infection are very common and extremely hard to cure. The physicians of the various charitable and other institutions in Toronto have had to contend with this again and again. Professor L. Emmett Holt has recently published two valuable articles on this subject in the *New York Medical Journal* and *Philadelphia Medical Journal*, describing a serious and prolonged epidemic in institutions under his charge in New York. The following conclusions are presented as a summary of the paper:

" 1. We must recognize gonococcus vaginitis as a very frequent disease and one to be constantly reckoned with in institutions for children. It is also very frequent in dispensary and tenement practice and not uncommon in private practice of the better sort.

" 2. In its milder forms and in sporadic cases it is extremely annoying because so intractable; in its severe form it may be dangerous to life through setting up an acute gonococcus pyemia or infection of the serous membranes, and in its epidemic form it is a veritable scourge in an institution.

" 3. The highly contagious character of gonococcus vaginitis makes it imperative that children suffering from it should not remain in the same wards or dormitories with other children. A similar danger, though less in degree, exists with the gonococcus ophthalmia and acute gonococcus arthritis or pyemia.

" 4. It is practically impossible to prevent the spreading of the disease if infected children remain in the wards with others. They must either be excluded from the hospital or, if admitted, immediately quarantined.

" 5. Cases of gonococcus vaginitis can only be excluded from hospital wards by a systematic microscopic examination of smears from the vaginal secretion of every child admitted. If a purulent vaginal discharge is present, such examinations are imperative, and should be made as much a matter of hospital routine as the taking of throat cultures in children with tonsillar exudates.

In the absence of microscopical examinations a purulent discharge in a young child may be assumed to be due to the gonococcus.

"6. The quarantine to be effective must extend to nurses and attendants as well as to children. Furthermore, the napkins, bedding, and other clothing of infected children must be washed separately from that of the rest of the house.

"7. Where the gonococcus is found with no vaginal discharge, or with a very slight discharge, children should also be quarantined, although it is impossible to say to what degree such cases may be dangerous in a ward. One of the greatest difficulties in connection with the gonococcus vaginitis arises from the prolonged quarantine rendered necessary from the fact that these cases are of very chronic character and very resistant to treatment.

"8. The danger to nurses from accidental infection, especially in the eyes, is considerable. At the present time they are not sufficiently instructed in this respect."

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## **X-RAYS IN THE TREATMENT OF CANCER.**

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BY CHISHOLM WILLIAMS, F.R.C.S. (Edin.), ETC.

Electro-Therapist at the West London Hospital; Surgeon to the City Orthopedic Hospital, etc

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THERE are many medical practitioners at the present time who have gradually come round to the belief that the X-rays can effect some good in the treatment of cancer. Among those who have followed the results of treatment which have been reported from time to time in the medical journals or who have had the opportunity of personally testing its value the general impression is that it is of great therapeutical value. There is no doubt that there have been very many failures in the past but it must be borne in mind that the majority of these failures occurred when we were using very imperfect and untrustworthy apparatus and when our experience was but small regarding the effects which could be produced. Another cause of failure in the early days of X-ray therapeutics was that many cases that were declared by the surgeon to be inoperable were sent to the X-ray practitioner. Increased knowledge of the capabilities of the X-rays has led surgeons to send to the radiographer patients who had a fair chance of life for, say, six months or more; in these one has been able to obtain a goodly number of encouraging results.

Gross failures are not reported here, as at the present time there is little to learn from them, for until quite recently cases of

cancer were only sent to the electro-therapeutist for X-ray treatment when they had already become "derelicts" to the knife or any other form of treatment. The custom of sending post-operative cases for treatment when the recurrence is as great in amount as, or greater than, the original condition at operation is quite absurd and has certainly accounted for many failures in the past: on the other hand, some patients will not persevere in consequence of their generally feeling and looking much better and locally being in an improved condition they discontinue the treatment. Another cause of failure is too energetic treatment and one is led to think that in many of the earlier cases the healthy parts instead of being stimulated to resist the inroads of the cancer were exhausted and ultimately rendered inert, consequently the growth advanced even more rapidly than before. It is not, in my opinion, good practice to shield the surrounding area in most cases, as the unshielded rays have a chance of reaching remote parts that, unknown to us, may be affected; but it seems possible that a layer of dry lint or other "stuff," which is transparent to the rays, placed over the whole part lessens the tendency to dermatitis—at least, that is my experience after a fairly extensive trial with various materials.

A certain amount of selection is nowadays required for the effectual application of X-rays. Broadly speaking, the more recent the growth the greater the chance of a favorable result. Cancerous ulcerations, primary or secondary, can be made to heal very readily, and it is often astonishing with what rapidity they close in. Many cases of sarcoma, even of large size, have been recorded that have disappeared under the X-rays: this is especially the case in recent sarcomatous growths of the young. In the majority of cases that I have had to treat where there was much glandular enlargement it is a curious fact to note that the glands actually infected became of stony hardness before they disappeared. One has so often seen the glands depart in such cases that I am led to the conclusion that frequently they are only affected with a simple inflammation from irritation of the secretions of the original growth and not from actual infection. In Case 7 (see below) there may be a doubt if the glands, though greatly enlarged, were actually infected. Another patient had the glands enlarged many months after the breast had been removed and the resulting scar was white and perfect; these were undoubtedly infected but readily disappeared with a few months' treatment, though this patient succumbed to a recurrence 11 months after, during which time no X-rays were applied. In one patient, a woman, aged 48 years, who had a primary carcinoma of the left mamma, quite two-thirds of the gland were involved and there were many lumps in the axilla which practically filled that space. She had refused any operative

measure. Under X-rays, administered for three times a week for over four months, the lumps cleared up and the breast contained a hard tumor much less than half the whole gland; this was then removed and was proved to be an ordinary scirrhus carcinoma. This patient has been since October, 1903, and is at the present time, in excellent health.

The above and other cases which have been reported seem to point to the advisability of X-rays being used in all cancerous cases before operation, for even a few weeks will tend to arrest further infection, and the glands if enlarged with simple inflammation or only slightly affected may disappear with a certain amount of shrinkage of the original tumor. It is becoming admitted that cases should be treated by the rays after operation to prevent a recurrence, and if used to prevent a recurrence why should they not be used at the very earliest occurrence, especially during that period, sometimes weeks, during which the patient is being prepared for operation? In skilled medical hands it is a treatment absolutely painless and free from danger. Again, in extreme ulcerations with sloughing fetid discharge there is not the slightest doubt that the offensiveness can be allayed if not made to vanish entirely.

The cases on which these notes are based were all of undoubted cancer, as will be seen from the pathological reports and microscopical evidence which are furnished in each case. I have purposely excluded rodent ulcer as it is common knowledge that that affection is readily cured by this form of treatment. My cases have nearly all been operated upon and the disease had recurred, some only locally; others were accompanied with glandular enlargement. The best cases for the X-rays are those in which the disease is strictly local, as in epithelioma of the lip, or has recurred in the scar in the shape of small lumps with the glands not largely affected. In some the better treatment may have been another operation, but the patients very naturally shrank from further operative measures after the second or third operation. Even in primary cases where the patient from either age or other causes refuses operation then much may be effected by X-ray treatment. In nearly all patients pain can be alleviated and reduced to a bearable quantity even when the growth is of most extensive nature. The actual bulk of the growth is very frequently reduced—this may possibly take place by allaying the irritation and thus getting rid of simple inflammatory products. The mere fact that something is being attempted for the patients has an extraordinary effect on the mind of the patients and very materially assists them to bear their burden.

One is often asked when should X-rays be tried? The answer is, in my opinion, directly the diagnosis is made, whether the

case is to go to operation or not. After operation, directly the scar is healed or even before that time if it shows the slightest appearance of being sluggish in the healing, a nodule of the size of a pea should have immediate treatment whether in the scar or not; this requires for its proper fulfilment constant observation by the medical attendant. A weekly examination is of the utmost importance to the patient. Even healthy wounds will heal the more readily under the stimulation of X-rays cautiously applied and in small doses, sufficient protection to the surrounding parts being all that is necessary. This form of treatment can only be applied with any degree of safety by medical practitioners; some terrible results have occurred in the hands of laymen and this fact has probably deterred patients and their advisers from taking full advantage of such suitable measures. One cannot promise, except in small superficial growths, a cure, but one can almost invariably obtain a measure of alleviation. I am chary of using the word "cure" to cases of cancer which have been under the X-rays but arrest and alleviation are terms which may be fairly used. My usual method is to treat the patient on several days a week to short exposure (from five to ten minutes) with the tube at a varying distance according to the quality and quantity of its discharge, etc., generally at a distance of from two inches to twelve inches from the skin, in order to produce the effect desired. If septic symptoms arise they are treated in the usual way, sometimes allowing a greater interval between each further application.

Case I.—The patient was a woman, aged 64 years. She attended at St. George's Hospital in March, 1899, for a tumor in the right breast. She was admitted under the care of Mr. J. W. Haward, who removed the breast containing a scirrhous carcinoma. In July, 1901, there was a recurrence in the scar and axilla, for the relief of which she was operated upon by Mr. H. C. Jeffreys. Six months later, in December, 1901, Mr. Clinton T. Dent removed several lumps from the right axilla. This patient then remained free and well for nearly three years, but in March, 1904, she consulted Mr. L. A. Bidwell at the West London Hospital. There were then found to be one small ulcer at the inner end of the scar and several lumps in the scar and axilla, which were adherent to skin and the underlying tissues; also there was great edema of the whole of the right arm. Microscopically the ulcer proved to be epitheliomatous. X-rays were applied twice a week with an exposure of from five to ten minutes; the ulcer readily healed in a few weeks and the axillary lumps one by one broke down and became simple hematomas; these were from time to time tapped and yielded disintegrated blood, the small incisions closing quickly. In June, 1904, treatment had to be stopped for a somewhat extensive dermatitis. It was resumed in August of the same



year. From that time onwards she has shown no sign of malignancy but has had intermittent treatment with the idea of softening if possible the lumpy scar in the axilla, thus relieving the edema of the arm which still persists though much improved. Even at the present time occasionally a lump will break down and the contents on aspiration consist as before but no trace of carcinoma cells can be found. The patient has gained 18 pounds in the past 16 months. She has practically no pain now and is in a good state of general health.

Case 2.—The patient was a man, aged 63 years. In October, 1904, he attended the West London Hospital for a little lump of a dark purple color situated on the right temple; it had been noticed four months before. He complained of its being very sore and stated that it bled very readily to the touch. He was referred to the X-ray department and a minute portion being detached it proved to be a typical epithelioma. He had 11 applications in all of about five minutes each. The lump came away as a dry scab. There has been no recurrence during the past 11 months.

Case 3.—The patient was a man, aged 59 years. In May, 1900, I removed by a V-shaped incision an epithelioma of the size of a large cherry from the lower lip. The Clinical Research Association reported that the part examined was "a squamous-celled carcinoma with surrounding tissues normal." In October, 1900, it had recurred in the outer edge of the scar as a dark purple nodule of the size of a pea. The X-rays were applied through a lead screen for six sittings of five minutes each. There has been no return during the past five years.

Case 4.—The patient was a man, aged 52 years. In March, 1903, Mr. H. T. Butlin removed an epithelioma from the inner side of the right cheek just in front of the entrance to Wharton's duct. Five months after it had recurred as a hard edged ulcer with raised rims, bleeding readily to the touch, even if the tongue was pressed unduly hard against it. Microscopically it proved to be a squamous-celled epithelioma. In July, 1903, the patient was treated to nine applications of the rays of about ten minutes each sitting. The ulcer quickly healed and at the conclusion all that remained was a hard-puckered scar. The rays were applied—through a glass Fergusson's speculum held in the mouth and the face was protected by a lead screen. It is now more than two years since the last treatment and there has been no recurrence.

Case 5.—The patient was a man, aged 38 years. In April, 1900, I removed a small tumor from the left parotid region; it had first been noticed in the preceding January. The incision healed by first intention. The Clinical Research Association reported on the growth that it was a "fibro-sarcoma with spindle cells." Four months after, in August, it had recurred in the

shape of a lump of the size of a walnut, fairly hard, and adherent to the skin and underlying tissues. The patient was treated to 13 applications of about five minutes each. The tumor rapidly disappeared. During the treatment a slight dermatitis was produced to the degree of dry exfoliation. There has been no recurrence during the past five years.

Case 6.—The patient was a man, aged 34 years. This is a very similar case to the foregoing. In October, 1904, I removed a small parotid tumor of the size of a large cherry which proved microscopically to be a mixed-celled sarcoma. Recurrence had taken place by March, 1905, to about the same size. During the treatment it became of stony hardness, then quite loose and shrunken to one-third its original size. It is still discharging externally a thin serous fluid at intervals. The patient has had in all nineteen doses of five minutes each.

Case 7.—The patient was a woman, aged 39 years. She attended at the Westminster Hospital in September, 1902, where Mr. E. P. Paton removed the left breast for a scirrhus carcinoma and, according to her statement, "it never healed properly." In June, 1903, she consulted Mr. Bidwell at the West London Hospital, who diagnosed the affection as recurrent carcinoma in the scar with infected axillary glands. There were four lumps in the scar, three of which were ulcerated in their middle; each was of the size of a penny and they were slightly raised; they were adherent to the deeper tissues. The lumps in the axilla were not very hard but each was of the size of a walnut and there was also a supraclavicular gland of the same size. The treatment by the X-rays was commenced on June 15th, 1903, and consisted of ten minutes' application given twice a week at a distance of three inches from the skin which was completely bared. After the ninth application a severe dermatitis was produced. The size of the area that ultimately peeled was 8 1/4 inches by 7 inches; it was practically the whole of the breast, the axilla, and the upper third of the inner side of the arm. This gradually subsided, when it was found that the lumps had all disappeared. On Sept. 14th I resumed treatment on the lumps in the axilla, carefully screening the healed parts; these quickly vanished. The patient had in all sixteen applications during a period of four months. During the past two years there has been no sign of a recurrence and the scar is very loose, and in the position of the ulcers the skin is peculiarly transparent owing to its extreme thinness; the underlying parts can be easily seen through them. At the present time there are no glands to be felt.

Case 8.—The patient was a man, aged 59 years (sent by Dr. H. Roxburgh Fuller). He was suffering from a very extensive growth of the rectum and anus which he had had for some 18 months and which had been diagnosed as a carcinoma by Sir Fred-

erick Treves and Mr. Anthony A. Bowlby. He was advised not to undergo an operation owing to the extensiveness of the growth. The examining finger could not reach beyond the hard masses in the rectum. Outside there was a horseshoe-shaped mass at the anal site; this was 3 1-4 inches across by 4 inches long and projecting 1 1-8 inches above the surrounding skin. A very slight trace of anus could be detected at the lower part. The growth, though fairly hard, bled very readily to the touch. Microscopically it was a carcinoma with much fibroid tissue. The patient suffered from incontinence of feces and had done so for over a year; he also had much pain and discomfort. He was compelled to eat his meals in a standing position. The treatment which I administered was from a high-frequency electrode giving off X-rays for an area of the size of a five-shilling piece which showed the terminal phalanges of the fingers well with the fluorescent screen. The applications were each of 20 minutes' duration from three to five times weekly and extended from June to November, 1903. A peculiar feature was the almost immediate production of an enormous flow of clear mucous discharge which only ceased towards the end of the treatment, when the original tumor consisted of a hard, fibrous, horse-shoe-shaped lump but only of the thickness of one's little finger. The incontinence had ceased and there was no pain to the examining finger which could easily get above the growth, the remains of which seemed to be limited to the sphincter alone and consisted of very hard tissue. The natural opening was considerably contracted. Colotomy was subsequently performed, the growth remaining arrested. There has been no recurrence.

Case 9.—The patient was a single woman, aged 42 years (sent by Dr. H. V. Griffiths). In June, 1899, the late Mr. Christopher Heath removed the left breast and glands for scirrhus carcinoma. There was recurrence in the scar and in the axilla 11 months after. A second operation was performed in March, 1900, and eight months later an ulcerated lump formed in the axilla, discharging thin serous fluid tinged with blood. The Clinical Research Association reported on a minute portion, "Consists of scirrhus carcinoma cells." X-ray treatment was commenced in November, 1900, with daily exposures of ten minutes each sitting, there being no shielding of the surrounding parts. After 16 applications a mild dermatitis was set up. There was a cessation of treatment for five weeks, during which time the patient went to the seaside. On her return she was treated for a further six weeks by two applications a week of five minutes each sitting. In all 28 exposures were given and there has been no recurrence during the past four and a half years and the patient is still in excellent health.

Case 10.—The patient was a man, aged 60 years (sent by Mr. P. Warner). In May, 1905, he was examined in consultation by Mr. Charters J. Symonds, Mr. Herbert Tilley, and his own medical attendant. He was also seen by Dr. L. Hemmington Pegler and the unanimous diagnosis was epithelioma of the throat. There was a typical malignant ulcer of the size of a penny on the left back part of the root of the tongue, invading the base of the left tonsil and left lower part of the pharynx. In the submaxillary region a fairly large lump could be felt and seen from the outside; it was adherent to the deeper structures and of the size of a large walnut. Several smaller lumps could be easily felt in the deeper parts. A minute particle proved the growth to be a squamous-celled epithelioma. The whole of the parts were indurated and matted together. The patient complained of constant dribbling and great pain with difficulty in swallowing even fluids. On May 31st treatment was commenced and consisted of exposures of from ten to fifteen minutes twice a week. The rays were passed through a glass Fergusson's speculum held in the patient's mouth. The ulcer quickly began to put on a healthy appearance and on August 9th, on coughing, the expectoration was saved and examined by Mr. G. L. Eastes who reported as follows: "These cells I certainly think are derived from a neoplasm and though the majority of them do not present characters which I consider diagnostic of malignancy, yet there are a few which have a very suspicious appearance." After three months, with 24 applications in all, the ulcer had contracted down to the size of a threepenny piece; the enlarged submaxillary gland was extremely small and soft, the other glands being of the size of peas, all freely moveable and without the slightest sensation even on hard pressure. The patient is much improved in every respect. The pain is slight and is due to the mechanical pressure of the scar; swallowing is easy, even of semi-solids. He is still under mild X-ray treatment but all signs of malignancy have disappeared.—*The Lancet*, November, 1905.

(Harry W. Cox, Limited, London, Eng., is one of the largest makers of X-ray apparatus in Great Britain. The J. F. Hartz Co., of Toronto, are their Canadian agents, and have their goods on hand).

#### Indirect Palpation to Outline the Heart: the Ictometer.—

L. Kurt (*Wiener klinische Wochenschrift*, Vienna) uses a wooden rod about 20 cm. long, with a small plate at each end, to estimate the movements of the thorax wall over the heart. He calls it the ictometer, as the heart-beat is sometimes called the ictus. It is possible with this little instrument to note delicate variations in the heart action over different segments of the heart, as he describes in detail.

## SYNTHETIC PURGATIVES—THE PURGATIVE ACTION OF DIHYDROXY-PHTHALO-PHENONE.

BY F. W. TUNNICLIFFE, M.D.,

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THE term "synthetic purgative" is perhaps not a very good one; by it, however, may be reasonably understood those organic purgatives which are made not in the laboratory of Nature but in the laboratory of man. The vegetable purgatives are, perhaps, from the standpoint of the chemist, the most impure substances in the pharmacopeia; indeed, in their very impurity rest, according to some pharmacologists, not a few of their virtues. One of the desiderata of a purgative is that the purgative principle shall come into contact with a maximum surface of the intestinal mucous membrane. The accomplishment of this is at least hypothetically favored by the exhibition of a crude drug, in that it may reasonably be inferred that the actual purgative principle will be gradually liberated from the mother-substance as the latter passes down the alimentary tract. The former will thus be brought into contact with successive areas of mucous membrane, and hence exert a continued purgative action. With these crude substances it is possible still further to determine the seat of their action in that some liberate their purgative principle only in an alkaline medium. Even when this is not the case, purgative substances can be protected from the action of either acid or alkali by suitable coatings. If, however, purer chemical substances were initially used, they might yield up their purgative principles *en bloc*, and hence enfold their purgative action high up in the intestines. They would thus tend to stimulate solely the very part of the intestine which needs it least, and leave unaffected the large bowel, to the sluggishness of which our clinical experience points as the most frequent cause of at least chronic constipation.

This reasoning, however, although plausible enough, does not, upon careful inspection, rest upon a very sound basis. We must regard from the pharmacological standpoint all the vegetable purgatives as essentially local irritants. Their irritant action varies according as they find themselves in an acid, alkaline, or neutral medium, and according to the presence in the intestinal contents of certain other substances, amongst which the bile must find especial mention. If, however, we possess a substance with these irritating properties, and if it be absorbed very slowly, or not at all, we have a purgative. It can matter but little whether the substance in question be a pure chemical entity or a crude mix-

ture. It is obvious that the irritation such a substance causes at any given point of the intestine will give rise to peristalsis, and this latter will ensure the irritant being passed on to an adjoining intestinal area, and so on, until the drug is either all absorbed, which *ex hypothesi*, is impossible, or all voided with the feces. From these considerations, therefore, it is evident that there is no cogent *a priori* reason why a perfectly chemical substance, when administered by the mouth, should not act as an efficient purgative of the vegetable as distinguished from the saline type.

The next event in the history of this interesting subject was an accident—one of the accidents of pharmacology. It is mainly of this accident that this paper treats. It was found necessary for administrative purposes in Austria-Hungary to earmark a certain kind of wine. This could best be done by adding to it a substance which, while colorless itself, readily developed a characteristic color upon the addition of some simple reagent. A similar method, it may be parenthetically remarked, has been adopted in Germany to earmark margarine. After some initial experimentation, the substance chosen for addition to this wine was the long-used chemical indicator, phenolphthalein. This substance is tasteless, and, in acid solutions, colorless; it is insoluble in water, but soluble in alcohol. What, however, fitted it pre-eminently for the purpose of earmarking the wine in question was the fact that upon the addition of an alkali to its solutions, owing to the formation of a salt, they assume a very brilliant purple color. Pharmacological experiments had previously shown that phenolphthalein in doses amounting to 1 gr. pro-kilo body weight caused no symptoms when administered to animals.

In consequence of being possessed of the above properties, phenolphthalein was adopted by the authorities for the purpose of earmarking a certain kind of wine, and was accordingly added to the wine in question. The wine to which the substance had been added went into consumption on the commercial scale, and the result was interesting, both to the consumer and the pharmacist. The individuals who drank the wine soon suffered from diarrhea, and the diarrhea continued so long as the wine was consumed. Subsequently, phenolphthalein was carefully examined with regard to its action upon the bowels, and it was clearly demonstrated by Vámosy that it invariably, even in small doses, acted as a purgative. These initial researches have been amply confirmed, and there can be no doubt that in phenolphthalein we have an important addition to our stock of purgatives.

Phenolphthalein belongs to a class of bodies known as phthaleins, which may be regarded as derivative of tri-phenol methane. The term phenolphthalein is one adopted for convenience, the name which actually expresses the constitution of this

substance being dihydroxyphthalophenone, one too unwieldy even for chemists, just as phenolphthalein itself is too unwieldy for physicians. To meet the exigencies of what will probably be the everyday prescribing of this substance, the name "purgen" has been adopted for it. In relation to what was said above concerning the properties of the active principles of certain of the vegetable purgatives, it is interesting to note that "purgen" itself is not, like ehrysophanic acid, for instance, a dye, but that it is nearly related to certain well-known dyes, for example, eosine and fluoresceine.

The phthaleins, as a class, are convertible by certain chemical reagents into anthracene or anthraquinone derivatives. They exhibit also in common with the latter bodies the physico-chemical property of tautomerism. These somewhat erudite facts are, however, of interest in showing that although it might have reasonably been inferred from the graphic formula of purgen that it would have a purgative action, yet nevertheless the fact that it does act as a purgative must tend to make us take a broader view of the so-called cecoproticophore group, and not fasten this exclusively to anthraquinone derivatives, properly so called. If one were to hazard a provisional hypothesis upon so scanty data, one would be rather inclined to regard the purgative action as due to the occurrence of hydroxy side groups in connection with carbonyl groups (CO), a feature which all the above bodies have in common.

#### MODE OF ACTION OF PHENOLPHTHALEIN AND ITS FATE IN THE BODY.

Before giving the result of the observations on the action of purgen on man it would be well to consider the *modus operandi* of the purgative action of this interesting substance and its fate in the body. Our accurate information with regard to the changes produced in the intestine by this drug is at present very scanty, the probability is that in the acid medium of the stomach it remains unchanged, but upon reaching the alkaline intestine it becomes converted into its sodium salt, which is more soluble and more active than phenolphthalein itself. This salt is, according to the observations of Vamossy, possessed of a very low power of diffusion. This property, according to the above observer, explains the purgative action of the substance in that, being indiffusible, its presence in the intestine occasions a high osmotic pressure, and consequently a copious accumulation of fluid in the gut. The purgative action of this substance is much more marked in man than in animals, and this is due, according to Vamossy, to the fact that in the latter the conversion of purgen into its sodium salt

either does not take place at all, or only to a very slight extent. Whether to these physical processes alone the purgative action of this substance is to be ascribed, the data at present at our command do not justify us in stating.

Concerning the fate of phenolphthalein in the body, all that can be said is that it is only to a very slight degree, and only after very large doses have been taken present as such in the urine. Its presence in the urine can, of course, easily be demonstrated. Upon adding a small quantity of alkali to such a urine it becomes at once either rose-red or deep purple, according to the quantity of phenolphthalein present. The question as to whether it is excreted in the urine as some derivative is not easy absolutely to decide. It must at once be admitted that anthracene, anthraquinone, and the phthaleins are, from the chemical standpoint, stable bodies, and only split up under the influence of strong chemical reagents. Reasoning from analogy, if phenolphthalein were split up in the body we should expect the resulting aromatic residue to be excreted in the urine in combination with sulphuric acid as a so-called aromatic sulphate.

With a view of ascertaining whether any increase took place in the aromatic sulphates of the urine after the administration of purgen two series of experiments were made, one upon two hospital patients who were on a constant but not weighed diet, and one upon myself, also on a constant but not weighed diet. The results of both these series of experiments showed no increase in the aromatic sulphates of the urine during the purgen period as compared with the fore and after periods. These experiments were not very accurate, for two reasons. In the first place the diets were not absolutely constant. In the second place purgation, *qua* purgation, invariably diminishes the aromatic sulphates in the urine. Nevertheless, it may reasonably be inferred from the above results that purgen is not excreted in the urine to any extent, either as such, or as an immediate derivative. This conclusion confirms that of Vannosy, who also found no increase in the aromatic sulphates of the urine after the administration of purgen.

Whatever doubt there may be concerning the presence of minute quantities of purgen or an immediate derivative in the urine of patients taking it, there can be no doubt whatever concerning its presence in the feces. If a small quantity of alkali be added to the motions after purgen has been given to a patient, the whole will quickly develop a brilliant purple color. This reaction is present occasionally for one or two days after the exhibition of a single large dose of purgen, but most often disappears with the purgative effect of the drug. Vannosy has made estimations of the amount of purgen present in the feces after its administration by the mouth, and has obtained from them 87.17 per cent. of the



ingested quantity. I have not had access to Vamossy's paper, and am ignorant of the method adopted by him. Whether the purgen present in the feces is unabsorbed purgen simply voided with them, or whether it must be regarded as having been absorbed and re-excreted by the intestine, is difficult absolutely to decide. All the evidence, however, points to the former view, and thus justifies us in concluding that in man the quantity of this substance absorbed into the body when it is administered by the mouth is a negligible quantity.

#### Therapeutic Use and Dose of Phenolphthalein.

With regard to the practical use of phenolphthalein, this substance has always been administered to patients in the convenient form of purgen. This preparation is put up into tablets of three sizes. The smallest of these tablets contain 0.05 gram, or, approximately 3-4 gr. of phenolphthalein. This sized tablet contains a suitable dose for infants and young children, and may be conveniently called "infant purgen." The next sized tablet contains 0.1 gram, or approximately, 1 1-2 gr. of the active principle—the dose usually suitable for adults—and may be conveniently termed "adult purgen." The largest sized tablets contain 0.5 gram of phenolphthalein, or, approximately, 7 1-2 gr., and are suitable for the subjects of obstinate constipation. The English agents for purgen are Messrs. Kirby, Newman Street, Oxford Street, from whom all these tablets may be obtained. In each class of individual mentioned above it is well to begin the treatment with one or two tablets, modifying the dose for further use as may be indicated. In addition to the observations detailed below, the purgative action of phenolphthalein in man has been studied by Vamossy and Unterberg.

During the last six months the author has made a series of observations concerning the purgative action of purgen in man. The cases in which this drug has been used may be divided into three classes:

#### CHILDREN.

Both in the in-patient and out-patient department of the Victoria Hospital for Children this drug has been administered, and for help in this matter the author is indebted to Dr. Turner, the house physician. Children from two months to seven years received the drug in the form of "infant purgen" tablets. In all, some fifty patients were treated in this way. The tablets were always readily taken by the children, as they have a distinctly pleasant taste, and were probably mistaken for sweets. In the case of babies under eighteen months old one to two tablets, that is, from 3-4 to 1 1-2 gr., were given, pulverized, in one or two

teaspoonfuls of milk. To elder children the tablets were given whole, the patients being told to masticate and then swallow them, which they readily did. The effect, as was to be expected, differed largely in different children. One, two, or in obstinate cases, three tablets when given upon going to bed, caused one or more evacuations of the bowels in the morning, or, when given in the early morning, acted shortly after breakfast. The first evacuation with the larger doses was usually liquid, but nothing approaching violent diarrhea or intestinal colic was ever observed. After the larger doses, in a few cases the urine, upon the careful addition of an alkali, gave a rose-pink coloration. In some cases the drug was administered every day, or every other day, for weeks together; it did not seem to lose its effect, nor was there any evidence of renal irritation. The conclusion that is to be drawn from these results is that purgen is a useful and safe purgative for children, but that its dose must be graduated in each case; and for this purpose the "infant purgen" tablets are exceedingly convenient, as, the unit being small, the dose can be easily increased by simply ordering two or more to be taken.

#### ADULTS.

In the case of adults the unit adopted was the "adult purgen" tablet. The patients were mostly the subjects of chest disease, and were either in-patients or out-patients at the North London Hospital for Diseases of the Chest. For help in this work the author has to thank Dr. Williams, the Senior Resident Medical Officer. The dose of the drug given varied within very wide limits, namely, from one adult purgen tablet, that is 1 1-2 grs. of phenolphthalein to two strong purgen tablets, that is 15 grs. The drug was generally administered to the in-patients by the night nurse in the early hours of the morning, and caused an action of the bowels after breakfast. The nature of the motion passed varied with the dose and the individual, but speaking generally, one or two adult tablets caused one or two soft but not watery motions. If the drug were given over night no discomfort ensued during the night, but an evacuation of the bowels occurred in the early morning. In all, some fifty patients were treated. Nine patients took this drug as a regular daily aperient; it did not seem to lose its effect, nor to cause any disagreeable secondary symptoms.

One may conclude, so far as adult patients are concerned, that phenolphthalein is a useful purgative, and may be given in doses of from 1 1-2 to 15 grs., that is, from one or more adult purgen tablets to two strong purgen tablets.

## EFFECT OF THE DRUG IN COMPLICATED CASES; SECONDARY EFFECTS.

The third class of case to which purgen was administered may perhaps best be designated as complicated. The patients were chosen with a view of seeing what, if any, of the effects other than purgation produced by other purgatives were caused by purgen.

The irritant action of certain of the vegetable purgatives upon the kidneys has been referred to above. With a view of ascertaining the properties of phenolphthalein in this respect it was given as a purgative to two cases of albuminuria. These patients were placed upon a constant but not weighed diet for three days, and the albumen in their urine estimated by Esbach's method. They were then given daily two adult purgen tablets, with the usual purgative result. The albumen in the urine was, during these three latter days, also estimated by the same method. No increase in the albumen took place, nor was there any microscopical evidence of increased renal irritation. From this it may be inferred that phenolphthalein may be used as a purgative in renal disease.

Phenolphthalein was given in two cases of jaundice in children. The jaundice was, so far as could be ascertained, what is generally known as simple catarrhal jaundice. The idea in giving this purgative to patients of this class was to see in the first place if it still acted as a purgative, and in the second place whether it exerted any action upon the secretion of bile. In both cases purgation was produced by the ordinary dose (two infant purgen tablets, 1 1-2 gr.). The motions, however, were clay-colored as before. From this we may infer that the purgative action of this drug is not dependent upon the appearance of bile in the intestine, and also that it has apparently no influence upon the secretion of bile.

The general use of purgatives for the purpose of reducing the systemic blood pressure in cases of hemoptysis or threatened cerebral hemorrhage, for instance, led us to make observations upon the effect of phenolphthalein upon arterial blood pressure. The instrument used for the purpose was the sphygmomanometer of Mosso, with which we have also made a series of observations upon the effect of magnesium sulphate upon the arterial pressure. A reduction of arterial pressure certainly was manifest after the administration of phenolphthalein, and lasted practically until the purgative effect of the dose given ceased, but the fall of pressure, in no case, even after large doses, approached in magnitude that produced by magnesium sulphate. This result is of importance in that it points to the conclusion that purgen will not be of service in cases in which we wish to obtain the secondary depres-

sant effect of a purgative upon the circulation; yet, nevertheless, it will probably be useful precisely in those cases in which we wish to avoid this depressant action. Especially is it advisable to do this in cases of morbus cordis with dilated and degenerate heart. In such cases, especially if associated with albumen in the urine, a non-depressant and non-irritating purgative is a desideratum.

#### CONCLUSION.

The results detailed above seem to justify the following conclusions:

1. For children, phenolphthalein in doses of from 3-4 to 2 1-4 gr. (one to three tablets of infant purgen) is a useful aperient.
2. For ordinary adults, this drug must be given in doses of from 1 1-2 to 4 1-2 gr. (one to three tablets of adult purgen).
3. In cases of obstinate constipation, the dose must be increased to 15 gr. (one to two tablets of strong purgen).
4. Phenolphthalein produces purgation in jaundice. It has no irritating action upon the kidneys; its depressant action upon the circulation is less than that of magnesium sulphate.—*Brit. Med. Jour.*

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#### THE CHOICE OF A UTERINE HEMOSTATIC.

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J. O. POLAK, of Brooklyn, discussing Carroll Chase's paper on "The Choice of a Uterine Hemostatic" (*Archives*, Oct., 1905), read before the Brooklyn Gynecological Society, remarked that the paper brought up a subject, which he believed we were too apt to neglect, that hemorrhages may be checked by other means than instrumentation, operation, and mechanical compress. Hydrastinine and stypticin were worthy of further emphasis, though the class of cases in which these were applicable is limited. He did not believe that cases of hemorrhage from retained secundines will stop by stypticin or hydrastinine, until the contents of the uterus are cast off. That may be done by time. A large number of these cases check themselves by time, and the effects of the hydrastinine and stypticin are coincident. There is, however, a class of cases where we do find these drugs to be of value, and that is in the class of hemorrhage which occurs in women with uteri that are out of proportion to the size of the woman, imperfectly involuted, and no drugs work better than hydrastinine and ergot. Occasionally you will find them of extreme value when combined with stypticin.

Again, the menorrhagia attending some menstrual epochs can be controlled with stypticin very nicely. The use of stypticin in

fibromata and fibromyoma has failed in his hands, as has also been the experience of the introducer of the drug in this country, Dr. Boldt. The hemorrhage is not due to the fibroid that is present, but to the hypertrophic endometritis that is coincident; and, consequently, many of these cases, even though they are treated locally by topical applications or drugs, do not improve, because of a lack of a thorough knowledge of the pathology.

Carroll Chase agreed with Dr. Polak that in these cases of hemorrhage following abortion there must have been either no material or little material left in the uterus. Nevertheless, some of these cases bled, and he did not know why. It is these cases in particular in which stypticin and hydrastinine will stop hemorrhage. He did not claim that hydrastinine or stypticin, given internally, will get rid of material in the uterus that is producing hemorrhage. He still believed that iron is a pretty good hemostatic, especially in carcinoma, and in a condition where you can thoroughly wash out the blood clots. He agreed with Dr. Polak that he would not use adrenalin for postpartum hemorrhage or for the treatment of fibroids. He thought the cases in which adrenalin would act well are those in which vasomotor constrictants would do the work, rather than drugs producing contractions of the uterus.—*Brooklyn Med. Jour.*, Sept., 1905.

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### THE RELEASE OF THE INFANT.

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THE Board of Education for Great Britain recently appointed five women to be Inspectors of Schools, and one result of this action has been a unanimous report by these ladies, which has secured in some measure the release of the infant from school duties. The report is written by the Hon. Maude Lawrence, Chief Woman Inspector to the Board of Education, and states that it has been found that children between the ages of three years and five years get practically no intellectual advantage from school instruction, as children admitted later can in six months or a year reach the same standard as those who have been in the school two years previously.

Thereupon the Board amended the Code of Education to allow local education authorities, at their discretion, to refuse to admit children under nine years of age to school. It is felt by many that the Board of Education should have gone farther and not shirked the matter by leaving the real decision to local authorities.

On the other hand, among the poor, the exclusion of young children from school is much resented, and felt as a hardship, because in many cases the mothers are the bread-winners, and

must be away from home. It is proposed to remedy this by the establishment of a crèche, or school nursery, in connection with Board Schools, for the little children of the poor.

Everybody is quoting Japan nowadays, and it is interesting to know that Japanese children are not allowed to attend school until after six years of age, because the Japanese believe that science has completely proved that school education before six years of age is mentally and physically detrimental. Science is great and will prevail, but common sense is greater, and "God's own common sense," to quote someone who is not Poet Laureate, has long ago settled that children need not go to school before seven. There was a woman in the north of Scotland who was visited by the truant officer in regard to her little children's absence from school. She replied that "Meat and mirth are a' that a bairn needs till seven," and being threatened with the terrors of the law, replied majestically that she "kenned mair about bairns nor ony Parliament mon up in Lunnon." Blessed be the independence of the Scotch mother in her castle of home in the North Country. Different, indeed, is the sad case of the widow and the mother who must be breadwinner among the submerged of London. Such a one told an experienced district visitor that she must get work, for her husband had none, and she had left him sitting crying at the side of a fireless hearth. The visitor advised her to go home and sit down and cry on the other side of the hearth until her husband went out to find work, for if she found work, and supported the family, her husband's character would deteriorate, and he would never be a man again. There is, no doubt, much truth in this view, and the efforts made in Great Britain just now to feed hungry children and give a hand to the submerged are wiser than they used to be.

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### LINES ON A SKELETON.

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BY WILFRED CAMPBELL.

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This was the mightiest house that God e'er made,  
This roofless mansion of the incorruptible,  
These joists and bastions once bore walls as fair  
As Solomon's palace of white ivory,  
Here majesty and love and beauty dwelt,  
Shakespeare's wit from these horn walls looked down,  
Sadness like the autumn made it bare,  
Passion like a tempest shook its base,  
And joy filled all its halls with ecstasy.

This was the home wherein all dreams of earth  
And air and ocean, all supreme delights,  
Made mirth and madness: wisdom pored alone;  
And power dominion held: and splendid hope;  
And fancy like the delicate sunrise woke  
To burgeoning thought and form and melody.

Beneath its dome the agony of the Jew,  
The pride of Caesar or the hate of Cain,  
The thought of Plato or the heart of Burns  
Once dwelt in some dim form of being's light.

Within these walls of wondrous structure, dread,  
A magic lute of elfin melody  
Made music immortal, such as never came  
From out those ancient halls of Orphean song.

Love dreamed of it, and like a joy it rose,  
Power shaped its firm foundations like the base  
Of mountain majesty: and o'er its towers  
Truth from fair windows made his light look down.

But came a weird and evil demon host,  
Besieged its walls, destroyed its marvellous front:  
Shattered its casements, dismantled all its dream,  
And hurled it down from out its sunward height:  
And now it lies bereft of all its joy  
And pride and power and godlike majesty:  
The sport of elements and hideous mines,  
That blench its corridors, desecrate its rooms,  
Where once dwelt love and beauty, joy and hope,  
Now tenantless: save for the incurious wind,  
And ghostlike rains that beat its bastions bare,  
And evil things that creep its chambers through.

But whither thence is fled that tenant rare,  
That weird indweller of this wasted house?  
Back from the petalled bloom withdraws the dew,  
The melody from the shell, the day from heaven,  
To build afar earth's resurrection morn.  
And so, Love trusts, in some diviner air  
The lord of this lorn mansion dwells in light  
Of vaster beauty, vaster scope and dream;  
Where weariness and gladness satiate not,  
Where power and splendid being know no ruin,  
And evil greeds and envyings work no wrong.

ABSTRACTS.

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**History of Cerebrospinal Meningitis.**—A. Gottstein (*Deutsche medizinische Wochenschrift*, Berlin and Leipzig) says that the history of this disease can not be traced farther back than 1805; previously to that date it was probably confused with typhoid. He cites the older authorities and mentions that the exanthem was described even in the earliest epidemics.

**Use of Nitroglycerin.**—C. Binz, Bonn (*Therapie der Gegenwart*, Berlin) showed long ago that nitrates may be converted in the system to nitrites. This action is the basis of the therapeutic efficiency of nitroglycerin. The results of various investigations concerning the toxic power and fatal dose of nitroglycerin have shown great differences of opinion among clinicians. Some regard it as a poison equal to prussic acid or nicotine, while others have found a tolerance of doses much larger than those usually thought safe, and two cases have been observed in which large amounts were taken without harm. Binz found, by experiments on animals, that doses much larger than those used in medicine produced no toxic effect. Man may react more readily, and there may be great differences between individuals. Binz found that one set of tablets contained scarcely a trace of the drug, while another showed more than the required quantity. The dry form, therefore, should be discarded for an alcoholic 1 to 4 per cent. solution. Of these solutions, one drop should be used as the initial dose, which may be gradually increased. Each drop represents from  $\frac{1}{4}$  to 1 mg. of the nitroglycerin. This drug has the advantage over sodium nitrate that it is not decomposed in the stomach, while it is more gradual in its action and more lasting in its effects than amyl nitrite. It has no explosive action when dissolved in alcohol, and, he thinks, may well supersede the nitrites.

**Value of Formaldehyd in Internal Medicine.**—P. Rosenberg (*Therapie der Gegenwart*, Berlin) does not believe formaldehyd to be highly poisonous and corrosive. Hundreds of patients who came under his observation showed no toxic action, and in all cases in which the blood and urine were examined there was no evidence of toxic action, no casts, and no albumin or changes in the blood. Because of their different action, formol and formalin should be distinguished from formaldehyd. The toxic action previously attributed to formaldehyd is due to its irritating qualities, and even these depend on the manner of its use. The irritating quality can be removed by combining for-



maldehyd with another substance from which it may be gradually split off. Jacobson experimented with such a preparation and demonstrated that it is non-toxic. When properly administered, formaldehyd has never had any bad effect on the human organism, even in pathologic conditions, and usually proved beneficial. Rosenberg claims to have found a stable preparation of formaldehyd in a compound from which it is gradually split off in the organism. It is administered in tablet form, and he regards it as a great advance in medication. The pleasant-tasting tablet may be held in the mouth, chewed, or taken in solution, but should not be swallowed whole. He is convinced that its use might be successfully extended to typhoid. It has not yielded conclusive results in tuberculosis, but it has proved very effectual in his practise in the last few months. He has used it exclusively in six cases of diphtheria, in seven of scarlet fever, two of erysipelas, one of pyemia, two of cystitis, and forty-five of tonsillitis. Each tablet contains 1 cg. of formaldehyd in a loose combination with milk, sugar and menthol, with some ordinary sugar and a little pepsin, hydrochloric acid and an aromatic vehicle.

**Study of Suprarenal Functioning in Disease.**—F. Luksch (*Wiener klinische Wochenschrift*, Vienna) estimates the functional disturbance in the suprarenals by the lesser pressure-raising power of the extract. His research on various animals showed that the suprarenals are not materially affected by various pathologic conditions, starvation, fever, etc., but that others, such as uremia, phosphorus poisoning, diphtheria and various infectious processes, apparently arrested the suprarenal functioning. The extract of the organs under these conditions failed to display the normal pressure-raising property. This functional disturbance in the suprarenals is probably one of the injurious factors that co-operate in serious infectious processes.

**Treatment of Coryza in Infants.**—L. Ballin, Berlin (*Therapie der Gegenwart*, Berlin) believes that the treatment of coryza in infants is especially important because the local obstruction to breathing sometimes prevents nursing, thus necessitating artificial feeding and often resulting in marked loss of weight. It may cause sudden death from asphyxia or from complicating capillary bronchitis, which is due, he thinks, principally to aspiration of infectious secretions from the nose. The swelling and secretion in the nose must be reduced, and since cocain is too dangerous, he recommends soaking a small tampon of cotton in a 1 per cent. solution of adrenalin, and placing it in each nostril alternately, leaving it from two to three minutes. The mucous

membrane becomes anemic, the swelling is reduced, and a mass of secretions comes away from the nose. Since the effect of this swabbing only lasts from three to four hours, it is necessary to repeat it three or four times daily, or even before every feeding, and to continue as long as needed. In cases of weak infants, with an exceedingly stubborn, bloody, purulent secretion as the result of a marked rhinitis, he uses a .5 to 1 per cent. silver nitrate solution in addition to the adrenalin. A drop of this should be applied once a day after the application of the adrenalin until the secretion stops permanently. Of seventy-five children affected with coryza, forty-eight were treated with adrenalin and the others were not. Only 12.5 per cent. of those so treated had bronchitis, while 44.4 per cent. of those not so treated were affected with it. In syphilitic coryza it is not only locally beneficial, but prevents a large number of deaths which would otherwise occur from aspiration pneumonia.

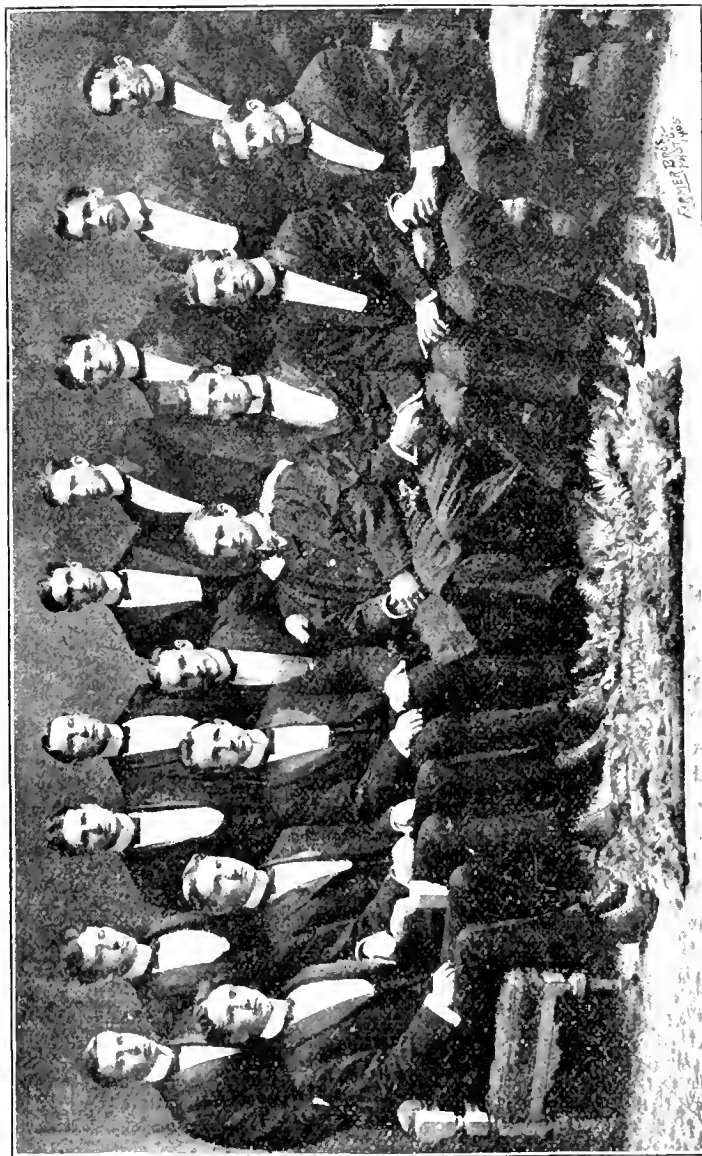
**Extirpation of Tuberculous Hip Joint.**—A. Lorenz and M. Reimer (*Wiener klinische Wochenschrift*, Vienna) advocate operating far into sound tissue, removing the capsule entirely, and not opening into the joint until the capsule has been completely detached from all the soft parts. To do this it is necessary to make an incision both in front and at the back of the joint. The connection between the trochanter major and the femur is left undisturbed. By this technic the unopened joint with the intact sac of the capsule is extirpated *in toto*. The leg is not much shortened, as the entire length of the femur from the tip of the trochanter is retained. They assume that the period of greatest painfulness coincides with an intra-articular abscess, and that this is the best time for the operation. Their experience with this technic has been very favorable.

**Goat's Milk.**—A. J. Wood (*Intercolonial Medical Journal of Australia, Melbourne*, May) refers to the difficulty in all large cities of obtaining fresh milk for infants, and advises the use of goat's milk for bottle-fed infants. He states that a number of infants under his care have been fed through the whole summer on pure goat's milk, and have never had diarrhea. He says that the mother of one of the children reported that the child digested the milk without the least sign of flatulency when it was given warm from the goat, while the digestion was not so easy if the milk had stood for some hours. He says that most children can digest goat's milk undiluted, and that while taking it they gain in weight and development. He calls attention to the custom in Switzerland and in some parts in Italy of shaving the udders and allowing the babies to nurse directly from the goat.

**Atrophic Alopecia.**—L. Brocq, Lenglet and Ayrignac (*Annales de Dermatologie*, Paris, gives an illustrated description in this article of a new clinical form of atrophic alopecia, for which the term "pseudo-pelade" is adopted. It is a process of atrophy and sclerosis affecting the hair-covered regions of the body, especially the scalp, terminating in patches of baldness, smooth, of pseudocicatricial aspect. It seems to be closely allied to erythematous lupus and keratosis pilaris. The article is based on three cases.

**Reaction of Phenylhydrazin.**—P. J. Cammidge (*The Lancet*, London, July 1st) describes a modification of von Jaksch's phenylhydrazin test as follows: 0.5 gram of phenylhydrazin hydrochloride and 1.5 grams of sodium acetate should be dissolved by gentle heat in a few cubic centimetres of water in a test tube and then from 5 to 10 c.c. of the urine added. The mixture is brought to the boiling point and maintained there for three minutes with strong, and five minutes with weak, solutions of sugar. The test tube is then set aside to cool and the deposit examined for osazone crystals in five or ten minutes. A "knife point" of sodium acetate is added to 10 c.c. of the urine, then from 1 to 2 c.c. of 10 per cent. acetic acid, and 5 drops of pure phenylhydrazin are introduced. The mixture is heated in the water bath or over the free flame in the same way as when hydrochloride is employed. Cammidge also mentions Kowarski's modification of this test, which gives very satisfactory results and is more delicate. It consists in mixing five drops of pure phenylhydrazin in a test tube with ten drops of acetic acid, gently shaking and then adding about 1 c.c. of a saturated solution of sodium chloride. To the solid mass that forms are added from 3 to 5 c.c. of the urine, and the test tube is heated in the free flame for two minutes after its contents begin to boil. On cooling, the osazone crystals separate from urines containing 0.2 per cent of sugar in one minute, and from weaker solutions in about five minutes. In examining 100 normal urines Cammidge found that when heated in the water bath for an hour, four of them showed a crystalline deposit, while by boiling in a free flame for five minutes six specimens gave a positive result. Using the same methods, but shortening the period of heating to twenty minutes and two minutes respectively, exactly the same results were obtained, so that the mere time or method of applying the heat can not be relied on to differentiate glycuronic acid from the sugar. Cammidge describes in detail his further researches on this subject and concludes by saying that it is evident that in phenylhydrazin we possess a most useful reagent for enquiring into variations in the urine accompanying certain changes in the metabolism.

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NO. 1.

## Editorials.

### TO MORROW.

We pause, as the book of nineteen hundred and five closes over, and, for the tenth time, we heartily wish our readers a Happy and Prosperous New Year.

Surely a decade is long enough to ensure a sincerity and security of feeling and good fellowship, and so the same old quill,

dipped in the same old ink-pot, in the same old office, grinds out, with a merry scratch, the words—"And many of them."

Coupled with our good wishes, may we again express our thanks to our subscribers, our advertisers; and so many do they both represent, that they have in a large measure enabled us to keep our first words of promise to the profession, and helped us to write indelibly "Success" as our banner word. As the old year is dying in the night, it seems a fitting time for remembrance, for rejoicing, and for resolution. As we contemplate the new paths of the new year, one persistent note seems to sing on, and re-echo, and our ears can only interpret in the sound the word—Work.

To make a medical journal interesting is not perhaps the easiest occupation in the world. Scientific fact must be set forth *racily*, often too much so, owing to lack of space. The truth must be frankly told, as it relates to the best ethical interests of the profession at large, no matter who feels the sharp edge of the lancet of justice. In emphasizing facts we often need severity and simplicity rather than efflorescence of language. We must be precise, often terse. In fact the medical journalist, like the village blacksmith of ancient poetic vintage, "must look the whole world in the face and fear not any man." We are proud of our Canadian physicians, and we look to 1906 to verify again their reputation, not only as knights of the scalpel, but in equal measure as Canadian knighthood in flower in the role of hosts to the members of the British Medical Association, which body is to grace Toronto with its august presence during the late summer. Let us one and all—

Varsity meds, Trinity meds,  
Meds of the old Rolph School;  
Toss up for beds,  
But say with bowed heads,  
"Messieurs, the whole house is yours."

Let us join in the hope that in 1906 the first sod will be turned for the foundation building of the new hospital, toward the completion of which the eyes of all our city physicians are turned with eagerness in their look. With much going on around us in the medical world, we pledge ourselves to try at least to chronicle the most interesting news, and be as up-to-date as possible. The mental strain of publishing even a medical journal is not a light,

easy task, not in the spirit of making much ado about nothing; but, realizing a certain aptness in their meaning, we take the liberty of quoting the celebrated Sir Henry Irving's words, pronounced at a press banquet: "I suppose there is no profession which makes such heavy calls upon the bodily and mental vigor of its servants as the profession of the journalist. Whoever nods, he must be always fresh and alert; whoever is content with the ideas of yesterday, the journalist must be equipped with the ideas of to-morrow."

W. A. Y.

### RAILWAY CASUALTIES IN THE UNITED STATES.\*

In studying the statistics of railways in the United States (Reports for 1903 and 1904 of the Interstate Commerce Commission) we have been particularly interested in the statistics of deaths and non-fatal injuries, attributable to railways, which occurred in the year ended June 30th, 1904, as compared with those occurring during the year ended June 30th, 1903.

The following table, compiled by the writer of this article from these statistics, shows the deaths and non-fatal injuries caused during the periods mentioned by railways in the United States, among passengers, employees and others, together with the increase or decrease of percentage under each head:

|                            | 1903        | 1904        | Increase per cent. |
|----------------------------|-------------|-------------|--------------------|
| Passengers carried.....    | 694,891,535 | 715,419,682 | + 3.               |
| Number of employees.....   | 1,312,537   | 1,296,121   | - 1.26             |
| Total killed.....          | 9,840       | 10,046      | + 2.09             |
| Total injured.....         | 76,553      | 84,155      | + 9.93             |
| Passengers killed.....     | 355         | 441         | +24.22             |
| Passengers injured.....    | 8,231       | 9,111       | +10.67             |
| Employees killed.....      | 3,606       | 3,632       | + 0.72             |
| Employees injured.....     | 60,481      | 67,067      | +10.88             |
| Other persons killed.....  | 5,879       | 5,973       | + 1.59             |
| Other persons injured..... | 7,841       | 7,977       | + 1.73             |

Passengers killed in 1903 to passengers carried as 1 to 1,957,440 ;  
in 1904 as 1 to 1,622,267.

Passengers injured in 1903 to passengers carried as 1 to 84,423 ;  
in 1904 as 1 to 78,522.

An increased percentage in every item of the figures for 1904 will be noted, with one exception, the decrease of percentage being in the number of employees. The statistics show that 60 per

\* Report of the Interstate Commerce Commission, 1904, received through the courtesy of Surgeon-General Hyman, M.H.S., Washington, D.C., Accident Bulletin No. 12, through the courtesy of W. E. Burleigh, Esq., Asst. Statistician, Interstate Commerce Commission.

cent. of the fatal accidents and 58 per cent. of the injuries to passengers, in 1904, were caused by movements of trains, locomotives or cars, agencies over which the passengers had no control. Thus, of 441 passengers killed that year, 169 were killed by collisions, 93 by derailments, and 3 by parting of trains. Of 9,111 passengers injured, 3,521 were hurt by collisions, 1,457 by derailments, 129 by parting of trains, and 38 by locomotives or cars breaking down. Such deaths or injuries, to quote the words of Henry C. Adams, Statistician to the Interstate Commerce Commission, "stand as an indictment against the railways in the United States." The 176 deaths and 3,066 non-fatal injuries to passengers, caused by falling from trains, locomotives or cars; by jumping on or off trains, locomotives or cars; by being struck by trains, locomotives or cars at highway crossings, at stations, or at points along the track; or from other unspecified causes, would appear to be attributable, in many instances, at least, to the fault, negligence, or incapacity of the passengers killed or injured. With increased population and greater density of railway traffic, deaths and injuries from such causes, for which railways cannot be held responsible, must necessarily increase.

In estimating the responsibility for fatal and non-fatal injuries to the employees of railways, one cannot look at the question from a viewpoint, as if one were estimating loss of life or limb by railway passengers. While railway travellers are exposed to risks, different to and perhaps greater than those encountered in ordinary life, the employees of railways are necessarily exposed to still greater and more frequent risks. Then, "Familiarity breeds contempt," as occurred in the case of an experienced stationman at a Canadian depot, who, after setting the automatic coupler of a car, stooped down to investigate a fault in an air-brake attached to the car, and became so absorbed that he did not pay attention to the slow but gradual approach of the locomotive which he was to assist in coupling. When he finally sprang to an erect posture, he was caught between the jaws of the automatic coupler and fatally injured.

Of employees, 3,632 were killed and 67,067 injured. Of these, 1,206 fatalities and 2,260 non-fatal injuries occurred as the result of being struck by trains, locomotives or cars. Without a study of each case one could not apportion the blame for



such casualties. Trainmen, trackmen, switchmen, watchmen, stationmen, shopmen, telegraph employees, or other employees, may get in the way of moving trains, cars, or locomotives through no fault of the railway, and, in the exercise of their hazardous duties about the tracks, they often escape death or injury from this kind of accident by the merest chance. We notice that the greatest number of casualties of this kind (438 killed, 833 injured) occurred to employees in Group II. of railways, which comprises the States of New York, Pennsylvania, New Jersey, Delaware and Maryland. In this group the number of employees per 100 miles of line was 1,402, the most densely populated railway group in the United States. Have the railways, during the year covered by this report, been peculiarly unfortunate, or have they operated with greater disregard of life and limb than in the previous year? In the case of railway employees, the statistics for 1904 show 1 employee to have been killed for each 357 persons in the employ of the railways, and 1 employee injured for each 19 persons in the employ of the railways. The corresponding figures for 1903 were 364 employees for 1 killed and 22 employees for 1 injured.

Now, as shown in our table, there was, in 1904, a 1.26 per cent. reduction in employees, together with a 3 per cent. increase in passengers. There was, also, though it does not appear in the table, an increase of locomotives, amounting in the United States to 2,872. Of this increase, 682 were passenger locomotives, 1,585 were freight locomotives, 552 switch locomotives. There was, also, an increase of 1,612 cars in the passenger service, as compared with the previous year, and an increase of 38,412 freight cars. This summary of cars does not include cars owned by individuals and private companies, on which the railways pay no mileage. It is strange, therefore, that in spite of the increase in locomotives, passenger cars and freight cars in 1904, fewer enginemen, firemen and conductors were employed that year than in 1903. With increased work and risk, these employees deserved an increase of pay, and they received it. More money was paid to every class of railway employees in 1904, as compensation, than in 1903. The excess amounted to \$42,277,395. The pay was good; but it does not seem reasonable to think that 52,993 enginemen were required to drive 43,871 locomotives in 1903, if 52,451 enginemen sufficed to drive 46,743 locomotives in 1904.

The reductions in the numbers of firemen and conductors are equally remarkable. One would say, either that too many engine-men, firemen and conductors were kept in the employment of the railways in 1903, or else, that the employees of these classes, who worked for the railways in 1904, were overworked. Fatigued from overwork, and stupetied by loss of rest, employees were likely to do poor work. Thus in statistics of 1904, "Collision 17, Class B., passenger and freight train: 2 passengers killed and 25 injured." The cause was that the freight train, waiting on a side track, ordered to meet 3 trains, was started out after 2 trains had passed. Conductor, engineman and flagman, while waiting, had slept, and on waking, assumed that three trains had passed."

It is clear that these employees were overworked. Enginemen, firemen and conductors were overworked in 1904 owing to the demands of the railway service. As passenger trains are scheduled to run at a fixed time, the trainmen who take them do not usually suffer from delays. Freight trains keep dodging in and out at sidings, endeavoring to supply the requirements of manufacturers and merchants, and their trainmen suffer long delays. Now, trainmen are paid by the 80 miles, the 100 miles, or the 120 miles, and not by the day. The engineman and fireman, of a freight train just returned after a long run, may be called on to take out another freight train; and, just to make good mileage, or to please the railway company, these hardly poor fellows try to perform their onerous duties, when they are physically unfit to do good work.

Would it not be a safer and a more humane practice, if the trainmen of freight trains were paid by the day, whether on duty or off, the railway companies being responsible for the physical and mental fitness of the trainmen?

Common laborers in 1904 suffered a decrease in numbers of 7,865; trackmen, exclusive of foremen, of 11,670; switchmen, crossing-tenders and watchmen, of 3,699. Now, laborers and trackmen help to keep railway tracks in good condition, repairing defects and removing obstructions, thereby preventing derailments due to defect of roadway, to unforeseen obstructions, malicious obstruction of track, etc.

The statistics show that, in 1904, there were in the United States 1,855 derailments, as compared with 1,176 in 1903, an

increase of 8.46 per cent. Of these 4,855 derailments, 866 were due to defects of roadway, 336 to unforeseen obstructions, 110 to malicious obstructions of track. The numbers of derailments for 1903 under these heads are: Derailments due to defective roadway 821, to unforeseen obstruction 277, to malicious obstruction of track 71. Evidently a full force of laborers and trackmen would have helped to prevent some of the derailments which occurred in 1904. Therefore, the railway companies who reduced the numbers of their laborers and trackmen in 1904 must be held responsible for many of the fatal and non-fatal casualties attributed to derailments during that year.

Of the 5,973 fatal casualties sustained by other persons, 5,105 were reported to be trespassers. Of the 7,693 injured persons in this category, 5,194 were trespassers. Railways are not legally responsible for the deaths or injuries of trespassers. By far the largest number of trespassers who were killed, 3,557, lost their lives: by being struck by trains, locomotives or cars, at points along the tracks other than stations or highway crossings, so that it is probable that many of these unfortunates were members of the great army of tramps, who wander along the tracks and secure railway transportation without paying for it.

In our next number an editorial giving statistics of railway casualties in Canada for the year ended June 30, 1903, and for the year ended June 30, 1904, will appear. J. J. C.

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#### A PURE MILK SUPPLY.

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THERE is no doubt that, if raw milk could be had fresh and untainted, and as often as it was wanted, it would require no boiling. The value of sterilization, as a means of reducing the risk of infective diseases, is undoubted, and, for this reason, it is used by private companies, and even by municipal authorities, in the preparation of modified milk for the infants of the poor. As is well known, however, sterilized milk may produce scurvy in hand-fed infants, and one such result from the municipal sterilized milk has been reported by H. Ashby (*B. M. J.*, Feb. 27th, 1904). It has been suggested, also, that the so-called "sterilization" of milk is apt to give a false sense of security, for actual freedom from bacteria is not always attained by it. Robertson and Moir

(*B. M. J.*, May 14th, 1904) examined a large number of bottles of supposed sterilized milk, supplied for infants by the municipal authorities of Leith, and found that only 15 per cent. of the bottles contained really sterile milk. According to Lesperance, whose article on the soluble ferments of cow's milk appeared in this journal in May, 1904, milk that has not been treated beyond a natural temperature is more easily digested, and gives greater vitality to the system, whereas milk which has been heated to a high temperature (176 deg. F.) produces "soft muscles, a generally irregular development, and a weakened resistance to infectious diseases." The difference, he thinks, is due largely to the destruction of the soluble ferments of cow's milk, which takes place when it is heated to a high temperature.

In endeavoring to secure a perfect milk supply, a municipal sanitary authority has to choose between the devil of infectious disease and the deep sea of impaired or arrested nutrition in infants. As long as cows are tuberculous, or scarlet fever and diphtheria are met with in the houses, about the clothing, and on the hands of the dairymen, and as long as typhoid stools are mixed with the water which is used for washing dairy utensils, so long will strong suspicion attach to the use of raw milk.

But it may be urged, that an annual inspection of dairies would cause the removal of the more flagrant sources of disease from milk, and secure a good supply. An annual, or even a quarterly inspection might answer in the cases of scrupulous dairymen; but would be insufficient in the cases of careless or unscrupulous dairymen.

For instance, the following appears in the Bulletin of the Chicago Health Department, for the week ended November 4th, 1905: "A total of 233 dairies, shipping 8,944 gallons of milk daily to the city, from 4,515 milch cows, were inspected during October. In 199 dairies the milking was done under proper sanitary conditions of cleanliness; in 231 the milk was properly strained; in 225 it was properly cooled; 207 herds were in good condition; 24 in fair condition, and 2 bad. On only one farm was 'wet malt' being fed, and 230 gallons of this milk was destroyed." If the inspection were merely an annual affair, many of the excellent conditions mentioned in this excerpt would cease to exist.

Then, even if the milk supplied by a dairyman is good, it may be sophisticated after it passes into the possession of the milk dealer. Thus, in Chicago, owing to the destruction or injury of apparatus used in milk analysis by the laboratory officials of Chicago, milk inspection was cut down 40 per cent. after September 2nd; from a monthly average of 1,506 samples during the previous eight months to an average of 894. "The unscrupulous milk dealer took advantage of the neglect of analysis, with the following results: Of 375 samples analysed, 5.08 per cent. were below grade; one sample contained 18.8 per cent. of water, or a gallon and a half of water to the eight-gallon can of milk. Three samples contained formalin in poisonous quantities. Of 127 samples, brought to the laboratory by private individuals, 7.7 per cent. were below grade. Six weeks ago the per cent. of samples below grade was 2.08. No wonder the babies' death-rate is increasing."

All the defects and impurities found in milk, however, are not traceable to dairymen who neglect the ordinary rules of hygiene, or to unscrupulous milk dealers. Many honest dairymen resent interference with their antiquated technic, and hold that the requirements of dairy inspectors are rather finical than wise. The following analysis of milk taken from cows kept in ordinary barns, the conditions as to cleanliness being about what obtains on the average farm, is taken from an article by W. H. Park (*Journal of Hygiene*, July, 1901, p. 391):

|                                   | Bacteria |         |
|-----------------------------------|----------|---------|
|                                   | Winter   | Summer  |
| Milk, shortly after milking. .... | 16,650   | 30,366  |
| Milk, after 24 hours. ....        | 31,000   | 48,000  |
| Milk, after 48 hours. ....        | 210,000  | 680,000 |

Such growths of bacteria in milk intended for human consumption can in no way improve the milk, but must seriously affect its wholesomeness. To avoid them the means are simple; cleanliness everywhere and low temperatures; cleanliness of the cow's exterior, of the stable, of the milkers and their clothing; of all vessels employed, milk pans, bottles, etc., and of the places where the milk is stored—in fact, as someone has epigrammatically expressed it, "sterilization of the cow and pasteurization of the dairy." Such methods of retarding the growth of bacteria in milk are superior to the use of boric acid, borax, salicylic acid,

carbonate of sodium, chromates and formalin. These substances are by no means wholly innocent in their action on the human system, even in very small quantities; and, moreover, it is impossible to control the amount added by a single individual, or to be sure that successive handlers have not contributed additional doses.

Raw milk, obtained by proper methods, is superior in nutritive value to a pasteurized milk. It may be added that, incidentally, the inspection of dairies would help to eliminate unsuspected sources of infectious disease in dairy farms, which would be helpful to the owners of these farms.

J. J. C.

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#### PROFESSOR MACALLUM'S LECTURE ON AFRICA.

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THE at-home given by the Dean and the Faculty of Medicine on Saturday, December 9th, in the Medical Building of the University of Toronto, was a very satisfying affair. After a few introductory remarks by the Dean, Dr. Reeve, Professor A. B. Macallum proceeded to give his lecture, "With the Camera from the Cape to the Zambezi Falls." The lecturer premised by stating that, as a member of the British Association, he had partaken of the hospitality of the Cape Colony Government last summer, and that during a five weeks' trip he had enjoyed better opportunities for studying the physical conditions of the land and the social status of the native inhabitants than falls to the lot of the average tourist during a twelve months' visit.

Having taken over 300 films, subsequently developed by himself en route, he was well provided with material, which was described to the audience in an interesting and instructive manner.

Perhaps the most attractive bits of African scenery shown were the views of the Zambezi Falls. Photographs of Bushmen, Zulus, male and female, Matabeles, and other natives of Africa, were shown. Some of the natives were pretty tall, but an ostrich, the photo of which had been taken at a station in Darkest Africa, topped them all. The lecture had all the freshness of first-hand observation, made by a trained observer. Professor Macallum evidently does not think that morality depends on a redundancy of clothes, for he gave high praise to the purity of the Zulu women,

whose fine figures, in keeping with the custom of the country, were almost nude.

The passion of the African for sweet sounds was illustrated by a picture showing a native contrivance made of beer bottles arranged horizontally and covered with a sounding board, which, when struck with little sticks, gave forth musical sounds, as in the performance on musical glasses. Another photo showed a brass band, composed of natives, who had been taught by the Jesuit Fathers at the Zambezi mission. The lecturer stated, that these native musicians had given some very creditable performances in presence of the visitors.

Professor Macallum's lecture contains the nucleus of a very readable book.

After the lecture refreshments were served to the guests, the Dean and Faculty of Medicine showing themselves to be very capable hosts.

J. J. C.

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#### EDITORIAL NOTES.

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**Esperanto, a Universal Language.**—The study of Esperanto, an auxiliary language, composed in 1887 by Mr. Zaamenhof, of Warsaw, has made considerable progress, and now bids fair to be employed in future international congresses. It is said to be a masterpiece of simplicity and clearness. Its grammar contains only sixteen rules, to which there are no exceptions, and is easily learned. In a few hours its mechanism can be mastered so that one can read it with the assistance of a dictionary. It is even said that with three or four months' practice one can understand, speak and write Esperanto. Differences of pronunciation peculiar to different languages will not prevent people from understanding each other when speaking Esperanto. Owing to the selections made of the roots of words, to the composition of the alphabet, from which letters difficult of pronunciation for certain nations have been eliminated, and owing to an absolutely phonetic method of spelling, Esperanto is pronounced by everyone in the same way, the only differences observed relating to the quantity (length or shortness) of some vowels. Quite a number of European scientists have devoted thought and energy to the propagation of the new language, and already a considerable library is at the disposal of

the Esperantists. The works of Homer, Virgil, Shakespeare, von Leibnitz, Molière, Goethe, de Maistre, Pouchkine, Tolstoi, and others, have been translated into Esperanto. Every month several reviews, published in different European countries, are written entirely in the new language. A scientific review in Esperanto, called *Internacia Sciencia Revue*, in which medical articles appear, is published by Hachette, Paris, and a medical periodical in the same language is announced in Russia. At a congress of Esperantists, held in October, 1905, at Boulogne-sur-mer, over fifteen hundred persons, French, English, Russians, Germans, Swedes, Norwegians, Italians, Spaniards, Poles, Hungarians, Turks, Japanese, Chinese, Portuguese, and others, took part in the business of the meeting, interchanging ideas and conversing familiarly together without the services of interpreters. At one of the evening meetings, Molière's "Marriage Forcé" was given in Esperanto by a troop composed of the following: Sganarelle and Geronimo, French; Dorimene, Italian; Alcantes, Belgian; Alcidas, German; Licaste, Norwegian; Panerace, English; Marphurius, French-Canadian; one of the gypsies a Swede and the other a Russian. G. V., who gives this interesting account in *La Presse Médicale*, states that all the fine points of the comedy were brought out in Esperanto before an audience of Esperantists, thus giving a convincing proof that the study of this auxiliary language is of the greatest interest to civilized people the world over.

**Potassium Permanganate in the Prevention of Infection of Dust-laden Wounds by Tetanus.**—Leonard Rogers, M.D., I.M.S. (*British Medical Journal*, November 11th, 1905), mentions the applicability of permanganate of potash, as a powerful oxidizing agent to overcome the infection of tetanus in dust-laden wounds. He infected rats with the dust of Calcutta streets, which some previous experiments of Major Drury's had shown will usually produce tetanus in four or five out of every six rats. Experiment 1.—Twelve rats were chloroformed, and a good pinch of dust, taken up with the finger and thumb, inserted under the skin of the back. In six of them, a few crystals of permanganate of potash were inserted at the same time, the remaining six serving as controls. Five out of these six died of tetanus, the organism being found in the wounds, but the sixth remained well. Of the six with the permanganate in addition, five remained well, and one



died of tetanus. This was a very severe test, as the amount of dust inserted was very large for so small an animal, and the results were highly encouraging. Experiment 2.—Twelve rats were chloroformed, and a number of abrasions and cuts down to the muscles were made in one thigh, and street dust freely rubbed in. Six untreated rats served as controls. In three more the wounds were washed with a strong solution of permanganate half an hour after the dust had been applied, and the other three were similarly treated after one hour had elapsed. These six treated animals all recovered, and the wounds healed rapidly, without sloughing or other trouble. Of the six controls, four died of tetanus, the bacilli being found in the wounds, and one of staphylococcus septiceemia. These results, as far as they go, show that permanganate of potash exerts a powerfully preventive effect against the tetanus infection in dust-laden wounds, and indicate, that this drug may be safely and profitably used in this class of cases in the absence of immediate medical assistance. Even in the hands of physicians, the difficulty of preventing tetanus with certainty, by careful antiseptic cleansing of dust-infected wounds, is very great. The propriety of applying crystals of permanganate, or a strong solution of the salt, to the recesses of a suspected wound, will therefore appeal to any surgeon, owing to the fact that the oxidizing effect of the drug would antagonize a bacillus, so markedly anaerobic as is the bacillus of Nicolaier.

**The Filtration of Public Water Supplies.**—Bacteriological and chemical analysis of public water supplies, pursued at the laboratory of the Ontario Health Board, frequently reveal pollution by animal excrements. This discovery emphasizes the necessity of improving the conditions surrounding these water supplies before they are distributed. If a water supply could be protected at its source, subsequent filtration would seem to be unnecessary. But, even when the gathering grounds of a water supply are protected: by the purchase of adjoining fields from private owners, and the removal of barns, dwellings, etc., from the neighborhood of the supply: by keeping fences surrounding the supply in good repair, pollution may creep in by animal excreta. Harrington sums up the case very neatly, saying, "The ideal course is protection at the source, followed by filtration before distribution. This is the method now adopted by the authorities of a number of

cities in Europe." There is every reason to believe that, with the growth of the system of preventive medicine, similar methods will prevail in Canada. As, however, in many instances, adequate protection of a water supply derived from a lake or large river cannot be accomplished, at the source of the supply or along its course, the only alternative is to purify the polluted supply by filtration before it is distributed. The object of all filtration of water is purification. This purification, wherever necessary, should be carried out by the municipal authorities. In reference to methods of water filtration, a committee of the American Public Health Association reported as follows: "There are two general methods of filtration, which have shown their practicability, namely, the English method of slow sand filtration, and the American method, employing rapid mechanical filters. Each of these methods has its distinct advantages for particular cases, as well as its distinct disadvantages for others. For those waters which never possess more than a slight or moderate amount of turbidity, or dissolved vegetable color, the English method of sand filtration is somewhat more efficient, and, as a rule, it is slightly cheaper for such waters. For those waters which for long periods of time contain excessive quantities of either finely-divided clay or of dissolved vegetable matter, there is now no practicable method of purification without the use of coagulant and subsiding basins. In such cases the American method, as a rule, yields somewhat more efficient and economical results. In Ontario there is no filtration plant modelled after the English method. At St. Thomas, Ont., mechanical sand filtration of the water supply, through Hyatt filters, has been employed for many years, with excellent results, the polluted water of Kettle Creek being transformed, after filtration, into wholesome, potable water.

**Is Christianity Inferior to Islamism in the Matter of Temperance?**—Dr. Emin Farady Khan published at Lyons, in 1904, a thesis entitled "Hygiene and Islamism," which he dedicated to H.E.M. Mouzaffer el Dine, the Shah of Persia. He shows the close relations which exist in the East, and particularly in Persia, between the laws of the Koran and the hygienic customs of the Mussulmans. He proves that fermented liquors, which are extensively used in Europe, where they injure health and pocket, are absolutely forbidden by the Koran. Whosoever breaks the

rule of obligatory abstinence, or has simply had contact with a vessel containing alcohol, is considered unclean by a Moslem. The author relates that persons who have disobeyed this law dare not kiss their own children until they have purified themselves by liberal ablutions. Besides, a Persian who wants to get wine or arrack, has to contend with enormous difficulties. For, as none of his countrymen will subject themselves to the "disgrace" of selling it, the Persian is removed from all temptation to buy it. A man who wishes to drink alcohol in Persia is therefore obliged to obtain a supply in a clandestine way by night; besides, if caught he is liable to lose his reputation and even to fall into the hands of the police. Alcohol, prescribed by a physician, is tolerated in Persia; but it often happens that the patients themselves request their physicians not to order alcoholic drinks for them. Among the nobility the use of alcoholics is increasing. In Turkey, and particularly in Algeria, Mussulmans who do not obey the laws of the Koran are relatively numerous, especially in the wealthy classes. Prohibition is better observed in Egypt. Emir Khan shows the incontestable superiority of Mussulmans over Christians in the matter of abstinence from alcohol, and he attributes this distinction especially to the difference of their religions.

**To Obtain a Good Supply of Milk.**—Until the dairies, which supply milk are placed in hygienic conditions, sterilization and pasteurization of milk are quite proper, and should be rigidly carried out. Sterilization of the cow and listerization of the dairy would, of course, be preferable; but, in the absence of adequate inspection and regulation of the milk trade, both of which should be attended to every month by the local Board of Health, or the Board of Health of the municipality in which the products of the dairy are merchandized, these desiderata are very rarely attained. If milk is adulterated, it can only be guarded against: by the local Board of Health taking care to have the milk supplies of the neighborhood regularly analyzed. This would imply that a Medical Health Officer should be able to analyze milk, or that a special officer should be employed as an analyst of milk and other foods. Milk may be obtained from a diseased animal, or, being a favorable medium for the growth of micro-organisms, it may contain the germs of disease. The duty of guarding against these two sources of danger should rest with the

local Board of Health or the health officials of the municipality where the milk is merchandized. It should be the duty of these officials to supervise the milk trade of the district from which their supply is drawn, and to see that regulations like the following, which are almost identical with the regulations prescribed by the Local Government Board of England, are carried out: (1) All persons carrying on the trade of dairymen or purveyor of milk must be registered. (2) No building may be occupied as a cow-shed or dairy unless the lighting and ventilation—including air space—and the cleaning, drainage and water supply are such as are necessary and proper (*a*) for the health and good condition of the cattle; (*b*) for the cleanliness of milk vessels used therein; (*c*) for the protection of milk therein against infection and contamination. (3) No person suffering from an infectious disease, or having recently been in contact with a person so suffering, may take part in the production, distribution or storage of milk. (4) No water-closet, earth-closet, privy, cess-pool or urinal may be within, communicate directly with, or ventilate into any dairy or any room used as a milk-store or milk-shop. (5) It is not lawful to use a milk-store or a milk-shop for a sleeping apartment. (6) It is not lawful to keep swine in any premises used as a milk-store or for keeping cows. (7) The milk from cows suffering from cattle plague, pleuro-pneumonia, or foot and mouth disease, must not be sold or used for human food. (This last rule might be amended so as to include garget and tuberculosis.) (8) It shall not be lawful to feed "wet malt" to dairy cattle.

**Are Eggs Poisonous?**—Dr. Gustave Loisel shows (*La Presse Médicale*, 8 Novembre, 1905, p. 797), by repeated experiments, that the yolks of the eggs of hens, ducks and tortoises contain substances which, injected into the veins, under the skin, or into the general cavity of the body, cause death, more or less quickly, as the result of an acute intoxication of the central nervous system. Thus, powdered yolk of duck's egg, mixed with a 1 per cent. solution of table salt, and injected into the veins, killed 1 kilogram of rabbit with a dose 7 to 8 grammes, and when injected into the caloma (body cavity) 20 to 30 grammes. The yolk of the hen's egg is a little less toxic than that of the duck; on the contrary, that of the tortoise is much more poisonous, since, to kill 1 kilo-

gram of rabbit, it suffices to inject into the oedema 5 or 6 cubic centimetres of the yolk of this egg. Dr. Loisel also shows, that the albumen of the egg of the tortoise is very toxic.

**Advantage of a Diet Free from Chlorine in Ulcer of the Leg.—**

Paul Olivier Thèse, Paris, 1905 (*La Presse Médicale*, 8 Novembre, 1905, p. 728), contends that renal, cardiac or phlebitic edema, accompanying ulcer of the leg, is favorably modified by a diet free from chlorine, which thus permits a more rapid cicatrization of the ulcer. He studied the results of this treatment in five patients with varicose ulcers, who were under the care of M. Thibierge. All other things being equal, he showed that one week of the chlorine-free diet sufficed to cause the disappearance of the edema, and, under these conditions, cicatrization of the ulcers was about complete in twenty days, which is a shorter time than surgeons observe after the greater number of the treatments tried in these cases. Although the number of the cases observed is small (five), the conclusion drawn from the facts is that the chlorine-free diet acts on varicose edema, but only influences the edema. Edema which accompanies the ulcer being evidently a cause of delay in cicatrization, a diet free from chlorine ought to be considered as an important adjunct of other methods of treatment, particularly compression and rest.

J. J. C.

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**PERSONALS.**

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DR. W. J. FLETCHER, of Euclid Avenue, has moved to his new house at the corner of Euclid Avenue and College Street.

DR. J. T. FOTHERINGHAM has moved from Carlton Street to 20 Wellesley Street, the handsome house he recently built for himself.

DR. R. J. WILSON, of Bloor St. West, has been appointed by the Whitney Government one of the License Commissioners for the City of Toronto. Congratulations, Bob, from your many college chums of nearly twenty years ago.

WE were pleased to hear recently, by letter, from our confrere, Dr. Charles O'Reilly who, on November 5th, was resting in Brighton, England. Dr. Brefney has just returned from a delightful trip to South Africa, and was doing some special work in London prior to sailing for India. Dr. and Mrs. O'Reilly expect to be back in Toronto this month.

# Obituary

## DEATH OF DR. JUKES.

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AUGUSTUS JUKES, late Surgeon-General of the Royal North-West Mounted Police, who died on December 3rd last, in Vancouver, was known in Toronto many years ago. His eldest son, Lieut. Wm. Jukes, of the Royal Navy, who distinguished himself in the Zulu war, was drowned at Gibraltar while trying to save a comrade. Dr. A. J. Johnson is a nephew of deceased.

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## DEATH OF DR. WILLIAM GEDDES STARK.

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On December 12th, at his residence, Secome, Pa., U.S.A., after a short illness, from pneumonia, William Geddes Stark, M.D., M.O.C.P. & S., aged 63. Son of the late Rev. M. G. Stark, A.M., Dundas, Canada, and beloved brother of Mr. Robert Stark and Miss M. A. Stark, of Toronto, and Mrs. Middlemiss, of Ingersoll.

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## DEATH OF DR. ARNOTT.

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THE death of Dr. Wm. J. Arnott, one of Berlin's leading physicians and best known citizens, took place on December 12th, after a brief illness. He suffered an attack of cerebral meningitis on the Monday previous, and became unconscious during the night, and remained in that condition. The deceased was born in Simcoe county in 1862, and at an early age commenced to teach school. In 1889 he entered Trinity College, Toronto, and graduated in 1893. He then came to Berlin, and built up a large practice. Three years ago he opened the Arnott Institute for Stammerers in Berlin. At the time of his death he was a public school trustee, President of the Berlin Musical Society, and President of the Berlin Conservative Association. Deceased is survived by his widow, the daughter of Mr. F. Krug, Tavistock, and two small children. The funeral took place on the 14th ult.

## *News of the Month.*

### INTERNATIONAL MEDICAL CONGRESS.

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THE Fifteenth International Medical Congress will assemble at Lisbon, Portugal, during the week from the 19th to the 26th of April, 1906. The official language of the Congress will be French, but in the general sessions as well as in the meeting of sections in addition to French, English and German will be made use of. There will be in all seventeen sections.

The President is Conz Costa Alemiao, and the Secretary-General is Professor Miguel Bombarda, of Lisbon, to whom all general communications regarding the reading of papers may be addressed.

Most of the countries will be fully represented at the Congress through the National Committees. For the United States, Dr. Jno. H. Musser, of Philadelphia, is President, and Dr. Raymon Guiteras is Secretary.

The Executive Committee of the Canadian Medical Association has appointed Dr. A. McPhedran as President and Dr. W. H. B. Aikins as Secretary for Canada, to act in conjunction with the International Committees of the Congress.

It is desirable that the Canadians who propose to attend this Congress should put themselves in communication as soon as possible with either of the above named, and it is hoped that Canada will have a large representation at this meeting as it will be the first International Congress at which Canada will have national representation.

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### RECEPTION AND AT-HOME AT THE WOMEN'S MEDICAL COLLEGE, TORONTO.

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At the Normal School, on November 23rd, the At Home of the Medico-Literary Society of the Ontario Medical College for Women proved quite a brilliant affair. The corridors and galleries of the old place, when well lighted and decorated, as they were for this occasion, makes a spacious setting for such a goodly crowd as was present that evening.

At the concert which took place first in the theatre, Dr. Nevitt, Dean of the College, presided, and a fine musical programme was

given, in which Miss M. Evans, Miss D. Blair, and Miss E. Robinson took part, special appreciation being shown for the playing of the violincello. Mayor Urquhart, Dr. Nevitt and Dr. Wishart gave short addresses.

Later on the guests were welcomed in the upper galleries by a reception committee which included Dr. Stowe-Gullen, Dr. Jennie Gray, Dr. Ida Lynd, Mrs. Sweetman, Mrs. (Dr.) Gebo Wishart, Mrs. R. Barrington Nevitt, Mrs. Cleland, Mrs. T. F. MacMahon, and Mrs. G. Chambers. In the moving crowd of well-dressed people the students of the Women's Medical College in their black students' suits, made a very distinguished appearance, and very becoming the gowns were. An excellent programme of music, rendered by an orchestra in one of the galleries, was an additional attraction to the young people.

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#### **DR. WM OSLER'S MOTHER REACHES THE WONDERFUL AGE OF ONE HUNDRED YEARS.**

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Mrs. OSLER, of Wellesley Street, widow of the late Canon Featherstone Osler, has just entered on the 100th year of her life. Rev. Mr. Osler and Mrs. Osler came to Canada three-quarters of a century ago. Mrs. Osler is in good health and in the possession of all her faculties.

Four of her sons have won great distinction in different walks of life. Dr. Wm. Osler, Regius Professor of Medicine at Oxford University, is the recognized leader of the English and American medical profession. Mr. E. B. Osler, M.P., Mr. Justice Featherstone Osler, of the Court of Appeal, are the two prominent remaining sons. The late B. B. Osler, one of the foremost men of the Canadian bar, was also a son, and the late Mrs. Williamson, President for Toronto Diocese of the Woman's Auxiliary, was a daughter.

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#### **MEDICAL STUDENTS ASK GOVERNMENT TO ENDORSE THE DOMINION REGISTRATION BILL.**

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A DEPUTATION of medical students, representative of McGill, London, Queen's and Toronto Medical Colleges, interviewed the Ontario Government on November 25th with regard to the Dominion Registration Bill, as introduced by Dr. Roddick. Petitions had been circulated within the various years, which were largely signed, with a view to showing the Government the general interest in the subject among the student bodies.



The Roddick Bill, as is now well known, proposes that fully qualified physicians in any Province shall be allowed to practice in any other Province as well. The medical students endorse this measure, and ask the Government and Legislature for their support and ratification.

The members of the deputation consisted of Mr. Munro, McGill; Dr. Etherington, Queen's; Mr. Reid, London; and Messrs. Kendall and McMillan, Toronto.

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### ITEMS OF INTEREST.

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**Bailliere, Tindall & Cox's Books.**—The firm of J. A. Carveth Co., Ltd., 434 Yonge Street, Toronto, has been appointed sole agents for the Dominion of Canada for all of the medical books published by Bailliere, Tindall & Cox, of Covent Garden, London, England. This is an exceedingly business-like step on the part of the English house, as it will mean that physicians in Canada can secure on a day's notice any book published by them. Orders can be placed through any bookseller in Canada, and they will be promptly filled.

**Digitalis in Renal Disorder.**—Digitalin (German, Merck) has been shown repeatedly by Henry Beates to be of marked superiority to all others. He long ago taught me to have confidence in its use even in chronic kidney disease, and I have used it, often in desperate conditions, with much satisfaction. The effects of digitalis can be safely measured and regulated, and at least ten years of experience in its use justifies the writer's confidence in this agent in threatening renal disorders.—J. MADISON TAYLOR, in *Med. Mirror*, September, 1905.

**Assistant or Accomplice?**—The designation "assistant" is distasteful to many men in the medical profession, who probably feel that one man is as good as another, and would be "a good deal better" but for the lack of opportunity. Benevolent, and it may be not altogether disinterested, diplomacy on the part of the principal sometimes seeks to avoid the parasitic stigma of "assistant" by the substitution of "colleague"; we have even heard the episcopal-sounding term "coadjutor" employed by courteous lay folk. It may be hoped, however, that the old lady of quality, quoted by Sir Mount-Stuart Grant Duff, did not quite mean what she said when, on being asked whether she had seen the doctor, replied: "No; but he has promised to send his accomplice."—*British Medical Journal*.

**Messrs. H. K. Wampole & Co.'s Removal to Perth, Ont.—**

On the 15th of December last, Messrs. H. K. Wampole & Co. removed their main offices and laboratories to Perth, Ontario. The firm have erected there a splendidly and modernly equipped factory, where they will in future take care of their entire business for Canada and Newfoundland. The new factory is more than double the size of the one just vacated on Lombard Street, and with new facilities Dr. H. W. Buck, the genial manager, tells us that they will be able to look after their rapidly growing business with redoubled energy. For the convenience of their Toronto customers, the firm have opened a branch in the Jessop Building, No. 80 Bay Street, where telephone messages will receive prompt attention.

**Saunders' New Catalogue.**—We have just received from W. B. Saunders & Company, of Philadelphia, the widely known medical publishers, an attractive illustrated catalogue of their complete list of publications. It seems to us, in glancing through this catalogue, that a list of the Saunders' authors is a census of the leading American and foreign authorities in almost every branch and specialty of medical science. And new books are being added and new editions issued with a rapidity that speaks well for the success and progressiveness of the house. While comparisons are always odious, still we feel it but justice to say that, in the presentation of facts about the books listed that a probable buyer wishes to know, and also for beauty and durability of mechanical get-up, this catalogue is a credit to the house who publish it. We understand a copy will be sent free upon request.

**Basedow's Disease Treated with Anti-Thyroidin.**—In view of the many favorable results reported, there can be no longer any doubt that antithyroidin, first recommended by Moebius, is of real value in Basedow's disease. A. Alexander relates in detail the history of several cases relieved by him with the aid of this drug. The most evident objective symptom of improvement is gain in weight, but the nervous and cardiac signs, the exophthalmos, and the thyroid tumor were also affected favorably. Large doses should be given carefully, since a condition suggesting myxedema may result.—*Muench. Med. Woch.*, 1905, No. 29. Two cases of Basedow's disease have come to the observation of Dr. Morre that have been very much benefited by the use of antithyroidin Moebius. In one, 70 Gc. (2 1-3 oz.) were given in daily doses of 5 Gc. (75 min.), with the result that many of the prominent symptoms of Basedow's disease were on the wane after fourteen days of treatment. In the second case, the exophthalmos and the thyroid tumor disappeared altogether after the administration of a total amount of 80 Gc. (2 2-3 oz.) of antithyroidin.—*Reichs Med. Anzeig.*, 1905, No. 18.

# *The Physician's Library.*

## BOOK REVIEWS.

*The Historical Relations of Medicine and Surgery to the End of the 16th Century.* An address delivered at the St. Louis Congress in 1904. By T. CLIFFORD ALBERTT, M.A., M.D., Hon. M.D. (Dublin), Hon. LL.D. (Glasgow), Hon. D.S.C. (Oxford and Victoria), F.R.C.P., F.R.S., F.L.S., F.S.A., Regius Professor of Physies in the University of Cambridge, Fellow of Gonville and Caius College, Hon. Fellow Royal College of Physicians of Ireland, and of the New York Academy of Medicine. London: Macmillan & Co., Limited. New York: The Macmillan Co. 1905.

This interesting work of 125 pages, comprising an address by so distinguished an author as T. Clifford Allbutt, will not fail to attract the attention of those interested in the early history of medicine and surgery. We found it a very interesting narrative, and, despite the many forgotten names, numerous footnotes and Greek quotations, we were forced to pursue the narrative to the end. It is beautifully written and worthy of a place in any medical library.

W. J. W.

*A Treatise on the Nervous Diseases of Children.* For Physicians and Students. By B. SACHS, M.D. Second edition, revised. New York: William Wood & Co. 1905

Sachs' book on "Nervous Diseases of Children" (first edition), issued ten years ago, has always been a favorite with the writer. During this time the work has appeared in German and Italian and is soon to appear in French. Writers of textbooks on medicine and pediatrics have shown their estimate of the work by quoting largely from it.

The book has been revised in every chapter and much new matter added, bringing it well abreast with the important advances made in nuerology and the allied sciences.

The author's style is generally clear, but at times it lacks in perspicuity; it must be admitted that his accounts of the less common affections are often verbose and tedious. One is surprised to find the author tripping in the use of a term which is mixed English and Latin—"tendon Achillis" (page 269). Such slips of the pen, however, are not common.

It is surprising to note how much neurologists in general have to say of drugs and the electrical treatment of nervous affections, which really accomplish so little good, and how little regarding the orthopedic treatment, which opens in many cases the only door of hope for improvement. Sachs, however, has shown a much more fair and just appreciation of the facts and conditions as they exist in both particulars; for example, in describing the treatment of infantile spinal paralysis he gives a very fair and succinct account of what may be done by surgical measures and of the good results that so frequently follow, and on page 268 he admits that the use of electricity is at best of doubtful efficacy.

The publishers have done their work well. The book may, with the utmost confidence, be recommended as a leader in its own field.

B. E. M.

*A Manual of Diseases of the Nose and Throat.* By CORNELIUS GODFREY COAKLEY, A.M., M.D., Professor of Laryngology in the University and Bellevue Hospital Medical College, New York. Third edition. New York and Philadelphia: Lea Brothers & Co. 1905.

On former occasions we have spoken favorably of this work, of which a revised and enlarged edition now appears. As was to be expected from the personal interest taken by the author in diseases of the accessory sinuses, the article on that subject is perhaps the most interesting and the most instructive, but that is no disparagement to the rest of the book.

J. M.

*Physical Diagnosis: Including Diseases of the Thoracic and Abdominal Organs.* A Manual for Students and Physicians. By EGBERT LE FEVRE, M.D., Professor of Clinical Medicine and Associate Professor of Therapeutics in the University and Bellevue Hospital Medical College; Attending Physician to Bellevue and St. Luke's Hospitals; Consulting Physician to Beth-Israel Hospital; Member of the New York Academy of Medicine, etc. Second edition, thoroughly revised and enlarged. Illustrated with 102 engravings and 16 plates. Philadelphia and New York: Lea Bros. & Co. 1905.

The author gives us a work on physical diagnosis, dealing in Part I. with topographical and relational anatomy; in Part II. with the respiratory system; in Part III. with the circulatory system; in Part IV. with the abdominal organs; and in Part V. he gives illustrations showing examinations with X-ray.

There is no doubt that a study of the normal physical conditions of the thorax and abdomen through inspection, palpation, auscultation and percussion, is a necessary preliminary to the study of disease in the viscera of these regions by the same methods

of examination. The medical student should be trained to exercise his special senses of sight, hearing, touch, and smell, in estimating differences in objects, normal as well as abnormal.

Dr. Le Fevre gives a clear statement of the various rules applied in the diagnosis of the diseases of the regions mentioned above. The text is well written, but occasional errors in spelling are noticeable, *e.g.*, "valleux," "quadratus lumborum," "tactus eruditus," "transversalis abdominis." Careful proof-reading should eliminate such blots from an otherwise irreproachable book. The printing and binding are excellent. J. J. C.

*Neurotic Disorders of Childhood.* Including a Study of Auto and Intestinal Intoxications, Chronic Anemia, Fever, Eclampsia, Epilepsy, Migraine, Chorea, Hysteria, Asthma, etc. By B. K. RACHFORD, M.D., Professor of Diseases of Children, Medical College of Ohio, University of Cincinnati; Pediatricist to the Cincinnati Good Samaritan and Jewish Hospitals; Member of American Pediatric Society, Association of American Physicians, etc. New York: E. B. Treat & Co., publishers, 241-243 West 23rd Street.

The above volume we have reviewed with great pleasure and profit. The subject is exceedingly interesting and the present treatise on it is fresh and fascinating.

It is logical to a degree and continually fortifies its positions by anatomical and physiological data. It is written in pleasing style, is well systematized, and is an exceedingly valuable addition to medical literature on the subject.

Part II. of the volume, in dealing with specific neuroses, mentioned above, is very good. In treatment it is particularly so, being based upon logical conclusions and clinical experience.

A. R. G.

*Practice of Medicine.* A Manual for Students and Practitioners. By HUGHES DAYTON, M.D., Principal to the Class in Medicine, New York Hospital, Out-patient Department; Clinical Assistant in Medicine, Vanderbilt Clinic, College of Physicians and Surgeons, Columbia University. Series edited by VICTOR COX PEDERSON, A.M., M.D., Instructor in Surgery and Anesthetist and Instructor in Anesthesia at the New York Polyclinic Medical School and Hospital; Genito-Urinary Surgeon to the Out-patient Department of the New York and Hudson Street Hospitals; Anesthetist to the Roosevelt Hospital. New York and Philadelphia: Lea Bros. & Co.

This is another of the medical epitome series and is quite up to, and in many instances above, the average. The author has endeavored to give a complete history of each disease treated in

as concise a manner as possible, and he has succeeded remarkably well. In many diseases this would be quite impossible, and in these cases he has very wisely avoided any attempt to epitomize such subjects, for instance, as typhoid, tuberculosis, etc. The arrangement of the subjects is good, the classification being simple and easily followed, and altogether this little volume should be of the greatest possible value to a great many practitioners, particularly those who have not the opportunities of having a very large library. It will be found of universal value to the busy general practitioner.

A. J. J.

*Manual of Pathology.* By N. M. SOLE COPLIN, M.D. Fourth edition, rewritten and enlarged. Philadelphia: P. Blakiston's Son & Co.

The fact that this work has been out of print for about a year is evidence of its popularity. Dr. Coplin is a practical pathologist, well known for the fineness of his technical methods, and it is to be expected that this character should shine out in his book. Where he discusses methods, as in the earlier chapter and the appendix, there is nothing superfluous, but every point bears the imprint of practical experience. The matter is thoroughly up-to-date, and when we find that Schaudinn and Hoffmann's spirochaeta pallida is fully described and illustrated we realize that the book must have been very recently rewritten.

The references to literature are carefully chosen, and such that they will be of value to those workers who have not a large reference library to consult.

J. J. M.

*The Medical Record Visiting List or Physicians' Diary for 1906.* New revised edition. New York: The William Wood Co., medical publishers.

Beginning with a calendar of half of 1905, all of 1906, and half of 1907, this handy little pocket visiting list gives us perhaps the best form of obstetric calendar, and one that has been in our hands for many years, and to which many of us owe our reputation for being able to fix definitely the date of approaching delivery. The maximum dose of all drugs as given by the month, both in the apothecary's and metric measure, takes up five or six pages, and is followed by solutions for subcutaneous injection and solutions in water for atomization and inhalation, with a few remarks as to the administration of medicine in different ways. Poisons and their antidotes, and what to do in emergency, with a description of artificial respiration, signs of death, hints on the writing of wills, etc., are all thoroughly and concisely worked out.

The daily list proper is so well and favorably known that it hardly requires any mention here. The charge for the week's

work, with a column for the page in the ledger, and special memoranda, fill up the table page. Besides special memoranda there is a place arranged in this book to suit those doing consultation practice which must serve a very good purpose. The records of vaccination and obstetric practice, winding up with a cash account, complete a volume which is well arranged, nicely printed, and well put together, and one that will be found of the greatest possible value to every medical practitioner.

A. J. J.

THE ALKALOIDAL CLINIC HAS CHANGED ITS NAME TO THE  
AMERICAN JOURNAL OF CLINICAL MEDICINE.

Drs. Abbott and Waugh, of Chicago, editors and proprietors of *The Alkaloidal Clinic*, send out the following announcement:

"With the January issue, in preparation, we change the name of *The Alkaloidal Clinic*, to one which more fully embodies the scope of our propaganda, namely, *The American Journal of Clinical Medicine*.

"We have added to our present strong editorial force (all of which is retained, and with no change in management, or any financial change whatever), Dr. Wm. J. Robinson, of New York City, who will conduct a department of 'Dermatology and Genito-urinary Diseases;' Dr. Emory Lanphier, of St. Louis, who will conduct a department of 'Surgery, Obstetrics and Gynecology,' and other departments will be added as arrangements can be made therefor.

"With this additional force, the make-up of the journal will be improved in many ways. The best minds in this country and Europe will contribute articles which will be of inestimable value to the general practitioner who is willing to learn and anxious to keep up with the times. Our platform is as broad as the world. We believe the physician should pluck the health-giving fruit, it matters not from what garden. Active principle therapy, surgery, synthetic chemistry, massage, electricity, serum therapy, hydro-therapy, radio-therapy, etc., etc., all of these offer us mighty weapons for our battle with the enemies of the human race, disease and death, and the new, enlarged, rejuvenated, and strengthened *Clinic* now called (as better indicating its scope), *The American Journal of Clinical Medicine*, will include all these weapons in its armamentarium. It will give its readers all that is best in medicine, all that is best in the literature of the world, all that is most helpful, most practical.

"The underlying principle of our great work is to safeguard the medical profession, to help them to higher planes of practice, to greater personal success, to bettered conditions in every possible way.

" We are opposed to quackery, however and wherever it appears. We are opposed to proprietary advertising to the laity against the medical profession, to the detriment of the people.

" We are opposed to the secret nostrum and the run remedy, decriing their exploitation to the profession, and more especially to the people, as a body-wrecking, soul-destroying crime that should be suppressed.

" We believe in and stand for the honest doctor and the honest pharmacist: their interests are mutual, and we decri all attempts to estrange them.

" We are fully alive to the great awakening of the public conscience now going on, proposing to stand on the very firing line of the movement for professional betterment and the public good, never taking a back step till a complete victory is won, and there we'll stick, too. We shall appreciate your co-operation."

*Surgical Aspects of Digestive Disorders.* By JAMES G. MUMFORD and A. K. STONE. New York: Macmillan & Co. Toronto: Morang & Co. 1905. \$2.50 net.

This is a good book. Like certain other good ones, such as Ashby and Wright on children, and Fowler and Godlee on the chest, it is the result of the joint labors of a physician and a surgeon.

Experimental surgery, in the new and splendidly equipped Medical Department of Harvard University, is receiving its fair share of attention, and in some degree this book is the outcome of good work being done there. The technique of a number of operative procedures has been notably improved, and some original expedients are presented for our trial and judgment. That patients by the thousand, suffering from intestinal indigestion and chronic appendicitis, are being cured of both conditions by epityphlectomy is known to every practical surgeon. We do not need to spend time in attempting to discover which diseased condition stands in a causative relationship to the other: it is sufficient that by an operation, the safest in abdominal surgery, both can be cured.

A defining of the limits of useful medical treatment in various diseases of the digestive organs, and an attempt to determine what surgery has to offer when such treatment fails, may be said to be in large part the object of the work before us. In it many new lines of thought and of investigation are opened up. The authors at times follow trails beyond when they have been blazed out, but, in the judgment of this reviewer, they never lose their way, and whether they are off or on the beaten track, we can ill afford to ignore the work they are doing.

N. A. P.



# The Canadian Journal of Medicine and Surgery

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## Original Contributions.

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### THE TREATMENT OF CYSTITIS.\*

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BY HOWARD A. KELLY, M.D.,

Professor of Gynecology, Johns Hopkins University, Baltimore.

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*Miscere utile cum dulci*, to impart useful information in an entertaining manner in general addresses of the character I am asked to deliver, seems to be a custom as old as, and closely akin to, the use of excipients to carry a drug which is not pleasing if taken in its naked strength. Who does not recall with pleasure the "elegant" mixtures, the electuaries, and the compound syrups of our forefathers?

I have tried to meet our expectations, by bringing before this large audience, representative of the advanced medical thought of our day, one of the oldest and most rebellious of the enemies of our race, namely, cystitis, bound in chains; and I trust that you will find no small satisfaction as you note that one more step has thus been taken in the path of therapeutic progress.

The *résumé* I shall give you embraces over eighteen years of a personal experience, largely devoted to this particular subject.

In order not to raise too great expectations, let me declare at the outset that, as is often the case in that difficult art which we profess, I have no single drug or method to propose by which all cases can be cured. It is only by a painstaking study of all the conditions, and by persistent patient efforts that cystitis can be understood and successfully combated. The therapeutic side of the subject in which your interest naturally focuses, is so large

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\* Read before meeting of Canadian Medical Association, Halifax, Aug. 22, 1905.

that I cannot do more than touch upon its history, etiology, pathology, chemical history and diagnosis.

#### HISTORY.

The names of two of our great fellow-countrymen stand pre-eminent in the history of the treatment of cystitis, and to them alone will I refer in this brief *résumé*, as they are in danger of being passed over in the hurry which characterizes the progress of to-day. One of these is Willard Parker, of New York, who, in 1850, at the Bellevue Hospital, operated upon a case of chronic cystitis in the male, stating that, "The object in view was to open a channel by which the urine could drain off as fast as secreted, and thus afford rest to the bladder, the first essential indication in the treatment of inflammation." This case was reported in the *New York Medical Journal* for July, 1851.

The other name is that of T. A. Emmet, who, in 1858, operated for a vesical calculus, and by the advice of Marion Sims left an opening in the vesico-vaginal septum, in order to afford greater facility in the treatment designed to restore the organ to a healthy state. Subsequently to this, Emmet "made an artificial vesico-vaginal fistula, with a view of giving rest to the organ by the free escape of urine." (*Amer. Pract.*, for Feb., 1872.) Emmet records several cases of cystitis treated by this plan in his classical work on vesico-vaginal fistula, published in 1868, while Parker also presented at the New York State Medical Society, in 1867, a paper on "Cystitis and Rupture of the Bladder Treated by Cystotomy."

One of Emmet's most rebellious cases, a woman who had suffered for three years, was examined "endoscopically," after cystotomy and irrigations of the bladder, by Dr. Newman, June 1st, 1869, and the bladder found free from disease, whereupon Emmet closed the fistula, and with some further slight treatments, she fully recovered.

I mention these facts, because I am sure we are too prone to forget the skillful labors of our predecessors, upon which all that we are successful in doing to-day rests as a sure foundation. All honor to these noble painstaking pioneers in this most difficult corner of our field of labor.

#### ETIOLOGY.

Again, I turn with no little pleasure to our clear-sighted Emmet, who, writing in 1872, says: "Neglect during labor to keep the bladder empty, exposure to cold, violence, and the habit of long retaining the urine, are the chief exciting causes of the most serious forms of cystitis." In investigating this, as in other inflammatory affections, we have to consider two factors—the predisposing causes which prepare the ground for the cystitis to

which we have but little to add to what Emmet has said, and the exciting cause, the particular living organism, which is the immediate agent in setting up and in maintaining the disease. It is the establishment of this last important factor which has given us a new conception of the subject, and served to modify and direct our treatments.

Contrary to the opinions of some ten years ago, we now know that the mere presence of organisms is not of itself sufficient to excite a cystitis. This is seen in cases of bacteriurea, where, although the urine is loaded with organisms, there is but a nominal lesion, or no lesion at all, in the bladder.

The following predisposing factors are important :

1. Localized congestion.
2. Traumatism.
3. Retention of urine.
4. Reduced health.
5. Two or more of these factors combined.

Congestion may result from "catching cold" and from exposure; or from the action of toxins or chemical irritants on the bladder, excreted by the kidneys; or from a hyperacidity of the urine; or, again, from the presence of tumors in the pelvis.

Traumatisms arise from labor, especially where the forceps are used with the bladder not emptied, from the use of the catheter, and, most important, from surgical operations on the uterus, involving the detachment of the bladder, and from stones lodged in the bladder.

Retention of the urine from faulty innervation of the bladder, as in tabes or after labor, and retention from a sense of modesty followed by the use of the catheter is a prolific cause.

Ill-health renders the whole body liable to the invasion of organisms, and coupled with any of the preceding factors renders the bladder a *locus minimae resistentiae*.

What are the organisms, then, which serve in the presence of such predisposing conditions, to bring about and maintain a cystitis?

I turn to answer this question to an admirable summary of my own cases, made by Dr. T. R. Brown, and published in the Johns Hopkins Hospital Reports, Vol. X., Nos. 1 and 2, for 1904.

There were twenty-five cases of acute cystitis, which revealed the presence of—

|                                    |          |
|------------------------------------|----------|
| <i>B. coli communis</i> .....      | 15 times |
| <i>Staph. pyogenes albus</i> ..... | 5 times  |
| <i>Staph. pyog. aureus</i> .....   | 2 times  |
| <i>B. pyocyaneus</i> .....         | 1 time   |
| <i>B. typhosus</i> .....           | 1 time   |
| <i>Proteus vulg.</i> .....         | 1 time   |



The important divisions of cystitis into acute and chronic separate the cases according to duration and intensity of symptoms.

DIAGNOSIS.

A diagnosis of cystitis may be made when pus is found in the urine, in association with an inflamed area in the bladder; the latter may be inferred by such symptoms as pain and fre-



DR. HOWARD A. KELLY, BALTIMORE, MD.

quent urination, or by a direct visual examination of the interior of the bladder.

I must bear in mind that my remarks may fall into the hands of some busy practitioners who find it hard to get time to use the microscope. I would, therefore, utter the caution not to mistake a pollakuria (frequent urination) for a cystitis. In my experience this has often been done, and then the active measures of

treatment instituted have converted the innocent but annoying disease into a dangerous one.

Again, a dysuria from hyperacidity of the urine is likely to be mistaken for a true cystitis, unless some other test than the subjective symptoms is applied.

Yet another caution: A little affection in the vesical trigonum, by the intensity of the symptoms it provokes, may hide a much graver and more advanced latent affection in one of the kidneys.

The diagnosis, to be sure and satisfactory, should ascertain not only the existence of a cystitis, but its extent as well.

A diagnosis which begins and ends with the word "cystitis" is as accurate as the statement that a patient has thoracic disease.

Again, even though the nature of the infecting organism is determined, the diagnosis is still no more accurate than it would be to say that the patient has pulmonary tuberculosis. In the latter case you see readily enough how vital are the questions, Where is the disease located? and, How extensive is it? Apply like questions to the bladder.

Let the man who is willing to go carefully into his cases rest his diagnosis on these factors:

1. History, including symptomatology.
2. Examinations of the urine, microscopic and bacteriologic.
3. A direct inspection of the interior of the bladder.

I cannot urge too forcibly the ease with which the examination is made through the open cystoscope, without any intervening medium of lenses or water, nor can I sufficiently declare the importance of the results thus obtained, in clearing up and giving precision to the diagnosis.

With such examinations, cases of "bacteriurea" become much rarer, as some infection of the vesical mucosa is almost always found, even though there is a remarkable disproportion between the local disease and the numbers of the bacteria.

#### TREATMENT.

I am especially glad to address you on the subject of the treatment of cystitis, as I have now had an experience of over five hundred cases, which have been carefully collated from my records by Dr. G. J. Campbell, of this city.

I think we have gone as far as we can under existing conditions, and must now await some fresh and important discovery before changing our present methods materially; and now when the specialist feels that he has pretty well threshed a subject out, it is time to hand his work over to the general practitioner, to see how much of it he is ready and able to appropriate.

Three important factors enter into the successful treatment of cystitis:

1. A full, carefully written analysis of the case, including a description of the lesions seen in the bladder.

2. A well-defined campaign against the disease, progressive in character.

3. Untiring patience.

All preliminary discussions as to history, etiology, and pathology lead up to the two great practical issues: How to prevent the disease, and How to get rid of it.

*Prophylaxis.*—I am convinced that if we pay closer attention to prophylaxis there will be a prompt and a large percentage



ONE OF THE LOG CABINS AT INDIAN POINT, MAGNETAWAN RIVER—  
DR. KELLY'S SUMMER RESORT.

reduction in the cases of cystitis. Many of the cases seen nowadays follow some abdominal surgical operation.

A potent factor in the prophylaxis is the proper use of the catheter, which I may summarize as follows:

A sterilized catheter; cleansing of the external genitalia and urethral orifice before introduction. The introduction of the catheter without touching the end introduced.

The bladder must not be permitted to become over-distended.

It is also important to remember that a patient, unaccustomed to lying on her back, often empties the bladder very imperfectly. If the urine tends to stagnate in the bladder, some

warm boric acid solution should be thrown in to wash it out, every time the catheter is used.

In abdominal hysterectomies, the bladder should be rubbed, touched, and bruised as little as possible. I have looked into the bladder after a hysterectomy for myomata, and seen large transverse striae of submucous hemorrhages on the posterior wall.

In another case, in which I recently reopened the abdominal wound, the bruised bladder was at first mistaken for a large, fresh blood clot.

Further, where there is reason to fear cystitis, and always when the catheter is used, it is well to give urotropin for a few days, in 5 or 10 gr. doses t. d., as a prophylactic. The consensus is that cystitis will but rarely occur if this precaution is taken.

*Remove the Obvious Cause.*—The sister of one of our ablest practitioners got up from her lying-in bed with a bad cystitis, which numerous treatments failed to ameliorate in the least degree.

She entered my cystoscopic room for the first time; I put her in the knee-chest posture and looked into the bladder, and, lo! there was a white calculus as big as a pigeon's egg lying in the vertex. With the removal of the calculus she made a prompt recovery.

Take nothing for granted; if you can look at a sore throat, you can also, with a reflected light and the small amount of patience necessary to acquire a little more dexterity, look into an inflamed bladder.

Make also a searching examination of every contiguous pelvic organ. If there is a large myoma, or an ovarian tumor, or a pelvic inflammatory mass pressing on the bladder and interfering with its proper evacuation, take the tumor or the mass out.

In the case of another patient with a bad pyuria, whose kidney was about to be taken out, I found a small suppurating dermoid cyst opening into the bladder by a sinus; the removal of the tumor and the closure of the orifice cured the disease and saved her from a serious mutilation.

In any obstinate case, especially if it is one of lesser degree, always remember that the source of constant reinfection may reside above in the pelvis of the kidney. If you find tubercle bacilli associated with a cystitis you may be sure that in nineteen cases out of twenty the primary focus is in the kidney.

As we consider the active treatment of a cystitis, let me urge two important factors, which serve as controls in testing progress towards recovery:

1. A careful preliminary examination and description of the local condition, as seen through the speculum, on the interior of



the hollow vesical sphere. If there is any marked improvement, examinations from time to time will show it by the variations in color, and in the extent of the lesions.

2. The taking of a measured quantity of fresh urine, say three platinum loops, spreading this on the slant agar, and then counting the colonies which grow out, as a means of testing the reduction of the amount of infection. These individual foci will often be found to diminish progressively from countless to discrete, to, perhaps, 100 to 15 or 20 to 2 or 3, to finally none at all. Several sterile cultures ought to be secured before the case is considered free of any risk of relapse.

Let us now consider our resources in dealing with a particular case. They are: Rest and dietetic treatment, medicines by the mouth, injections into bladder, direct topical treatments of the vesical walls, surgical treatment, including incision of the bladder, and excision of the disease area.

*Rest in bed* is of the most importance. I can always do far better for a case if I can get her into my hospital, where she has rest associated with regulated diet, tonics, the due regulation of the bowels, massage and baths.

*Medication by the Mouth.*—Large quantities of bland water is a valuable remedy here as in pyelitis. The virtue, I think, in the various lauded waters resides in the pure *aqua potabilis*, which they contain, and not in the various salts shown in the analysis. Some patients will take, however, with better grace, three or four pints daily of a water which is imported in a big bottle with a sounding name, than the simple, but equally efficacious spring water from a home source. It is the old tale of the bread pill and the placebo.

Urotropin in 5 to 10 gr. doses is of value in the more recent cases.

The citrate of potash is valuable where the urine is too acid, while boric acid is of use to correct an alkaline urine.

There is some advantage in reversing the chemical reaction of the urine under which the organisms are flourishing, though not so great as one would have anticipated.

Cantharadin has been used by Freudenberg with the greatest benefit, in a series of 56 cases, curing 32 rapidly. The formula is Canth. (Merek), 0.001 in 1.0 alcohol, dissolved in 100 water. Take three or four times a day, teaspoonful doses.

I use also fluid extract of corn silk (*Zea mais*), in teaspoonful doses, with advantage in the amelioration of the symptoms.

Irrigations form, perhaps, the most important means of treatment at our command, and with irrigation it is well to combine distention of the bladder.

The simple daily cleansing of the bladder in this way is of

the utmost value, and many cases would recover rapidly, if only bland fluids were used.

The two most efficient drugs for this purpose are the nitrate of silver, 1:1500 to 1:500 or stronger, and mercuric sublimate, 1:1000.

As good a plan of administration as any is to connect a rubber tube with a funnel attachment to the catheter, and then slowly elevate the funnel two or three feet above the level of the pelvis. By the amount borne and the height, the progress of the more difficult cases towards recovery can be pretty well estimated. The quality of great importance here for both patient and practitioner is patience. It sometimes takes weeks or months to secure the first decided step in advance, with many apparent back-sets in the interim.

I must confess to you right here that in several of my cases, which we have worked over for one, or two, or even more years, securing a recovery in the end, I would never have had the courage to persevere had it not been for the unflagging interest and zeal of Miss Cook, my chief nurse, who has personally conducted almost all of the treatments.

*Direct Topical Treatments.*—When a cystitis is in the chronic stage, and is, furthermore, localized in a small area in the bladder, one, for example, which could be covered by the last joint of the thumb, direct topical treatments often hasten the improvement and even effect a cure. The bladder is emptied and the patient put in the knee-chest posture, then through an open cystoscope, using a head mirror or other suitable illuminant, the patch of inflammation is exposed and treated just as a chronic sore throat is handled, making a direct strong application by means of an applicator and a pledget of cotton. Nitrate of silver is best here, too, used over a small area, as strong as 50 p.e. For larger areas use 10 or 5 p.e., taking care that there is no excess of the solution to run down over the sound mucosa. I also use freely a 50 p.e. solution of argyrol. Subsequent treatments must be milder, and at intervals of from three to seven days. A 1 and a 2 p.e. solution is often valuable in trigonal inflammation (trigonitis).

An admirable and effective combination is formed by associating occasional topical treatments with daily injections and distensions.

*Surgical Treatment of Cystitis.*—It is in the surgical treatment of cystitis that the greatest difference is found between our practice and that of our immediate predecessors, of even a decade ago. And it is here that I have some fresh additions to make, bringing some utterly rebellious cases entirely within the scope of successful treatment.

There are two kinds of vesical surgery, minor and major.

Minor cystic surgery consists in the use of a sharp or serrated curette, or a wire brush, or a bunch of fine wire needles. I expected great help from these instruments when I began to use them, but I must confess to disappointment in the issue. The tissue removed is of value in differentiating a tubercular bladder, but I cannot see that the recovery is hastened, while harm may be done, as Sampson has shown, if the ureteral orifices are injured, by favoring an ascending infection.

*Major Surgery.*—When I receive a case of intense vesical inflammation, where all local treatments, even the mildest, are impossible on account of the pain produced, I, without loss of time, resort to major surgery, and propose at the outset to put the bladder at rest by making the Parker-Emmett incision, in order to secure good continuous drainage. I do this in a few seconds, often by putting the patient in the knee-chest posture and letting air into the bladder through the urethra; then lifting up the perineum the anterior vaginal wall is exposed and lifted a little on a pair of curved artery forceps, introduced through the urethra and slightly opened. A knife is plunged through the septum at this point, and the opening enlarged fore and aft until it is at least an inch long. I wipe out the bladder thoroughly with dry gauze, and sew the vesical mucosa to the vaginal at about six points, to prevent too rapid closure of the wound. All this takes about the same time to do as it does to describe the operation.

Such an opening ought to be left, as a rule, for from three to six months. The bladder and vagina should be irrigated every day either *per urethram*, if not too sensitive, or *per vaginam*. A continuous daily hot water bath, as recommended by Hunner, leaving the patient immersed for hours, is a most valuable adjuvant in the worst cases. In due time the bladder will be found to have cleared up, perhaps wholly, when the fistula is closed and the patient discharged. On the other hand, many cases clear up only to a certain point and go no further, and of these I wish to speak somewhat particularly, for this is that large residual group of our worst cases of cystitis, generally looked upon as hopeless.

Let me briefly outline the treatment of such a case. In the first place, given one of these intensely inflamed old cases of cystitis in a patient worn out with vigils and suffering, mild courses of treatment are worse than useless, serving only to increase the distress. To avoid discouragement, tell the patient, who has suffered for years, that she must be content to give a few months or, perhaps, a year or more to getting well. Then begin by opening and draining the bladder, then when you find the organ cleared up to one spot, you may try for a few weeks to heal

that by direct applications of nitrate of silver or argyrol, and in this you may succeed. If you fail and there is a tendency to relapse, make a suprapubic opening and cut out a crescentic piece, including the entire thickness of the bladder wall, and sew it up with catgut sutures on the inside and fine silk on the outer surface.

If you have to open the peritoneal cavity, and the bladder is a foul one, you can sequestrate the entire vesical region by suturing the round ligaments and the uterus to the abdominal wall from side to side, converting the peritoneal cavity behind the symphysis into a closed pouch, which is then drained over the symphysis. In a bad case which I treated in this way and had to open later for an ovarian trouble, there was no trace of the pouch left.

I have not found great help from the making of a small suprapubic opening in association with a vaginal opening for through and through drainage. If, however, worst comes to worst, I would make a big suprapubic opening, partially detach the recti, and put the patient in the hot tub for as many hours daily as she could stand.

Let me illustrate the group of difficult cases by giving you a brief outline history of seven of my patients. In two the disease was tuberculous, in the others the organism was a colon bacillus.

CASE 1.—Mrs. R., aged 55, came to me in October, 1899, with a chronic cystitis, which had persisted for fourteen years in spite of being several times "cured." I found the entire vesical mucosa covered with scattered foci of ulceration pouring out a curdy pus. The urine was alkaline, containing a short organism, probably the bacillus colon.

She received under my care the following treatments: A borax and soda solution by irrigations, applications of the nitrate of silver (2 to 4 p.c.), insufflations of boric acid powder against the diseased vesical wall, formalin irrigations (1:15000 to 1:2000), irrigations of silver nitrate from  $\frac{1}{2}$  to 1 p.c. strength.

Under these treatments there was a steady improvement, the organisms decreased, and the capacity of the bladder increased from 60 to 280 c.c. She was cured in forty-one days. I tested the efficiency of the treatment by making cultures on several successive occasions and noting that there was no growth. So since this cure there has been no relapse.

CASE 2.—Miss J. MacD., aged 33, came to me in 1899 suffering from frequent mictions with a slight pyuria and hematuria.

Examinations showed an area of intense cystitis at the vesical vertex; as she had suffered for four years I proceeded at once to surgery and opened the abdomen, excising an ulcerated area of

the bladder at the vertex  $3 \times 2\frac{1}{2} \times 1\frac{1}{2}$  cm. in size. This was closed without drainage, using sixteen catgut sutures in the first, and ten in the second layer. She recovered at once and has been in the best of health ever since.

The pathological examination of the greatly hypertrophied bladder wall showed granulation tissue and inflammatory infiltration.

CASE 3.—Miss J. R., aged 29, came to me in March, 1900. She had been suffering with her bladder for five years. It is probable that the frightful cystitis from which she suffered was induced by catheterization in a hyperacid bladder in a nervous woman. She was in a wretched mental state from the suffering night and day, emptying her bladder every few minutes.

The urine was full of pus and contained blood; cultures showed that the infectious organism was the colon bacillus.

Cystoscopically, the bladder was of an intense angry red color, with extensive areas of ulceration; there was not even a small area of sound tissue seen at any point. She simply screamed whenever she was touched.

She was about three years under treatment, and her recovery is largely due to the untiring efforts of my chief nurse.

The following treatments were used:

1. Curettage and the use of the wire brush over the whole inner surface of the bladder, followed by a 10 p.c. solution of silver nitrate.

2. Fourteen days later another curettage.

3. Ten days later I was able to catheterize the left kidney and demonstrate a left pyonephrosis, which was opened and drained. At the same time a suprapubic cystotomy was done to facilitate irrigating the sensitive bladder. I left a mushroom catheter in the kidney wound and a ureteral catheter in the ureter, to facilitate washing out the kidney.

4. Dilatation of the renal and suprapubic openings.

5. Left nephrectomy (intracapsular enucleation) by morcellation. Closure of the suprapubic opening.

6. Plastic operation narrowing the urethra, which had been overstretched before she came to me.

7. Plastic operation repeated.

The bladder was so small when I began to treat her that she could not hold as much as 10 c.c. of fluid, and even under extreme anesthesia she strained and forced the fluid out if more was thrown in.

During all the time of the above treatments she received 135 irrigations of either boric acid or nitrate silver with boric acid.

Under this regimen the bladder recovered its capacity and

normal appearance. To-day she is in perfect health and suffers no pain. The only remaining discomfort is that she urinates often, and this I have been unable to overcome, although I can now put 400 c.c. into her bladder.

CASE 4.—Miss C. P., aged 52, came to me in October, 1902. I saw her first in bed, a hopeless invalid, in intense pain, with spasmodic exacerbations day and night. I never saw a sadder picture. She lay moaning like a suffering animal in a constant state of apprehension of pain, and screamed when the vagina was touched, even for the purpose of making the gentlest examination. The entire bladder was the seat of intense inflammation and ulcerations from the vertex to the left ureter. Its capacity was two-thirds of an ounce (20 c.c.).

She has made a perfect recovery and has remained well, under the following treatments:

1. October, 1902, a vesico-vaginal fistula was made for drainage.

2. November, 1902, a suprapubic fistula was made to wash through and through; at the same time I enlarged the vesico-vaginal fistula. A plastic operation was necessary to open the vulvar orifice, which acted like a sphincter, retaining the foul urine in the vagina and bladder.

3. January, 1903, dilatation of suprapubic fistula with Hegar's dilators and introduction of a self-retaining catheter.

4. February, 1903, left nephroureterectomy, removing a tubercular kidney and ureter.

5. April, 1903, closure of the vesico-vaginal fistula.

Irrigations of a half-saturated solution of boric acid were given from one to six hours daily, amounting in all to 1,000 hours of treatment.

The result has been an absolute recovery, and she is now stout, robust and able to attend to all her household duties in town and country.

CASE 5.—Miss L. M., aged 24, came to me in January, 1900. She had had a vesico-vaginal fistula made to drain an intensely inflamed bladder three years before.

After trying various palliative measures, I opened the bladder above the pubis and trimmed off numerous granulations from the posterior vesical wall and then drained the bladder with iodoform gauze.

In November, 1902, I excised the entire diseased area, including all the bladder wall, removing a triangular area from the vertex to the base of the bladder 1 cm. in thickness, and closing the opening with interrupted catgut sutures tied within the bladder. This is the case in which the whole bladder area was excluded from the peritoneal cavity by sewing the round liga-

ments and fundus of the uterus to the anterior abdominal wall. (See *Johns Hopkins Bulletin*, 1903, p. 96.)

All of the disease was not removed at this time, and I had subsequently, on account of repeated hemorrhages, to open the bladder again (November, 1903), and excise three pieces, one in front, one at the vertex, and one at the posterior wall.

The wounds were again closed with interrupted catgut sutures tied on the inside of the bladder. It was wonderful to see how little traces were left of the sequestration operation; there were only a few adhesions between the bladder and the tubes and ovaries.

Remarkable features in this case were, first, the fact that giant cells were found in the tissues excised, when we had been utterly unable to discover any tubercle bacilli in curettages or in the urine, examined repeatedly over periods of months' duration; second, that the disease was primary, as far as the urinary organs were concerned. In the bladder, there was no renal disease.

CASE 7.—Mrs. H. M., aged 34, came to me in May, 1901. She was an utter wreck from nine years of suffering, extremely emaciated, and abandoned to die of an advanced tuberculosis of both kidneys and bladder. The bladder was ulcerated from vertex to urethral orifice and there was not a sound spot to be seen.

I began, May 4th, by draining the bladder by the vagina and giving rest from the constant suffering.

May 18th, a left nephrotomy was done.

June 15th, left nephrectomy and a ureterectomy as far as the pelvic brim.

October 14th, closure of the vesico-vaginal fistula.

October 22nd, 1902, extirpation of the lower end of the ureter.

February 24th, 1903, suprapubic resection of the bladder, taking away about one-half of the bladder, including the left ureteral orifice.

April 9th, 1903, closure of the vesico-vaginal fistula.

With these surgical measures were associated irrigation and distention treatments, as well as topical treatments with silver nitrate.

From holding nothing at all, the bladder has increased to an almost normal capacity in spite of the extensive resection; in October, 1903, it held 225 c.c.

She is now practically a well woman, stout, hearty and attending to all manner of household and social duties.

I trust, in conclusion, gentlemen, that I have demonstrated that, granted the important elements, skill and patience, practically all cases of cystitis, even the worst, can be cured.

The first important step is to make a correct diagnosis, so as to treat as a cystitis a case of irritable bladder.

The next step is to determine the grade of the disease and the character of the infection, and, most important, to differentiate tuberculosis.

Again, the kidney must be borne in mind as a possible source of reinfection in cases very slow to clear up.

After a thorough study of the field begin an aggressive campaign on the lines indicated, well-defined and progressive until the patient is cured.



## THE TREATMENT OF SOME FORMS OF EMBRYONIC GROWTHS BY ELECTROLYSIS.

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THE growths to be considered in this brief paper are some of those "congenital, circumscribed, cutaneous anomalies"\* termed nevi, and more particularly nevus pigmentosus and nevus vasculosus.

In nevus pigmentosus or pigmentary mole the hypertrophy may be confined to an excessive circumscribed deposit of pigment in the skin, or one or more of the constituent elements of the skin may be involved as well. Moles may be of any shade of color from light fawn to jet black, and from a pin head to a fetal head in size—the smaller the size the more regular the outline of the mole, as a rule; they may be single or multiple, covering the surface of the body with hundreds of spots in reported cases. There are several varieties of moles; for example, nevus spilus, of smooth surface, slightly elevated above or level with the surrounding skin; nevus verrucosus, of rough, uneven and warty surface; nevus lipomatodes, thick, soft, connective-tissue growths, usually subcutaneous; nevus pilosus, covered more or less with hair.

In nevus vasculosus, or nevus flammeus, the blood vessels of the skin and subcutaneous tissue are the elements involved. The capillary form is the one most frequently met with, the venous least so. Vascular nevi may be of any color from the faintest blush to the deepest purple, fading temporarily under pressure, and vary from the size of a pin point to the extent of an extremity, or even half of the body; they may appear as a mere stain, as punctate spots, as a tortuous vessel barely below the surface, or as small or large tumors. Hutchison reports a case of a child which had over one hundred vascular nevi, all distinct and superficial. Varieties of vascular nevi are nevus simplex and angioma cavernosum. Nevus vasculosus simplex or simple angioma is known to the laity as "port wine stain," "strawberry mark," "mother's mark" and occurs in smooth, flat, non-elevated or very slightly raised, well-defined or faint patches. Angioma cavernosum, tumour erectile or cavernous nevus is met with as a prominent, turgescient, erectile or even pulsating, tumor-like growth, enlarging during crying or other emotional disturbance. The classification is that of Van Harlingen.

Primarily nevi are benign growths and frequently give rise to no inconvenience or may disappear spontaneously, but such is not

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\* Macleod.

always the case. Thus the pigmentary form when irritated by friction of the clothing, or otherwise, may become inflamed or ulcerated, or alarming hemorrhage may occur from them, or they may undergo cystic or colloid degeneration, or may become sarcomatous, or even carcinomatous. Vascular nevi may enlarge to such an extent as to endanger surrounding tissue or organs, causing deformity, if not actual destruction; they are subject to ulcerative or suppurative changes, may bleed profusely on slight provocation, may undergo cystic or other degeneration, or develop into malignant growths. Thrombosis may also occur.

For these reasons, apart from the cosmetic standpoint, no nevus, however apparently insignificant, should be considered as being beneath our attention. All new-born infants should be carefully examined at or within a few days of birth, and at frequent intervals thereafter, for nevi frequently escape detection during the early months of life. Should any nevus or suspicious spot be discovered on the skin it should be examined from time to time, and if it shows no signs of disappearing by involution by the third month, it is advisable that means be taken at once to check or remove the growth.

Examples are met with all too frequently which bear out this contention for early operation in cases of nevus. A case very much to the point was recently seen: A child, five years of age, had a cavernous angioma involving almost the entire extent of each buttock and extending beneath the surface to the depth of about two and a half inches in each, with a very offensive purulent discharge from the ulcerated surfaces, and a history of several alarming hemorrhages; the right buttock considerably larger than the left, and hanging an inch and a half lower than it was when the child was erect; the inguinal glands on each side enlarged, and many evidences that the angioma had become sarcomatous. A spot "like a splash of red paint" had been noticed upon each buttock about ten days after birth, but the mother had been told that it was "only a birth mark" and would disappear of itself.

The majority of the various forms of nevus are amenable to treatment by means of electrolysis, and when properly employed in suitable cases this method is preferable to any other; but, as has been well said by Hayes,\* "in no other operation do experience and judgment play a more important part than in electrolysis of nevi." Electrolysis affords better results with less scar than any other method at present known.

An early resort to electrolysis is preferable for many reasons; the case is more amenable to treatment then than when the tissues are more matured, the operation is shorter, repetition is less

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\* International System of Electro-Therapeutics.

necessary, more tissue may be saved, sloughing and resultant disfiguring cicatrices are less liable to occur, for the resistance of the tissues being lower, a lower voltage will suffice, and should a scar result it is more likely to disappear as the child grows.

Catarrhal conditions of mucous membranes, eruptions, or an irritable condition of the skin contra-indicate operation, and if present must receive attention before operation as they retard healing, and may set up and prolong suppuration. The better the health of the child the more successful the result. Apart from this nothing is to be gained and much lost by deferring operation beyond the third month of life.

Unless in the case of adults, general anesthesia is imperative. A sudden movement might start a troublesome hemorrhage, crying might have the same result, and it is very desirable that the patient be perfectly quiescent until not only is the operation complete, but also all dressings in place as well.

No hard and fast rules can be laid down as to technique, but in general terms it may be said that when the removal of redundant tissue is aimed at, the positive pole is the one we employ in the growth, both for its direct destructive action and for the production of an artificial thrombosis by coagulation. Where we desire to promote absorption, or to block up capillary vessels by bubbles of hydrogen, thereby causing atrophy, or where a scar is particularly to be avoided the negative pole is attached to our active electrode.

The monopolar method is usually preferable with platinum-iridium needles for positive pole puncture, gold needles for negative pole puncture, and for the indifferent electrode the perforated brass plaque or brass wire gauze, faced with absorbent felt (piano-maker's) and backed with rubber sheeting. The gold needles are convenient in that they may be bent to desired curves very readily. Zinc needles amalgamated with mercury are sometimes of service as positive active electrodes, especially in cavernous angiomas. Collodion affords an excellent extemporaneous insulation for all needles to prevent electrolytic action at the surface of the skin.

The indifferent electrode is generally placed at the shoulders, a convenient size being 4-12 by 7 inches.

In dealing with nevus pigmentosus, if hairs are present they must first be removed by electrolysis in the usual manner before the nevus proper is attacked, else they may grow up through the cicatrix. The active electrode is attached to the negative pole. In the smaller nevi the needle is introduced parallel with the surface, and as near it as possible, and just sufficient current used to blanch the part. This being accomplished, the needle is withdrawn and reinserted in different portions until the whole nevus

has been blanched. In some cases it is possible to attack all portions through the one external opening, especially if the needle be curved; a smaller cicatrix will be the result. It will not be necessary to cut the current down at each withdrawal of the needle as your meter should show only from one to five m.a., but in dealing with the larger nevi where greater current strength is necessary it is advisable that no current be on either at introduction or withdrawal of needle, and all changes in current strength must be very gradual and not abrupt. In the larger nevi, and especially in the warty variety it may be necessary to employ sufficient current to mummify the growth, but caution must be exercised, lest a depressed cicatrix result from too great destruction of tissue.

The nevus vasculosus simplex will tax one's skill and patience as only a very limited portion should be treated at one time. The mark should be attacked from the edges, the multiple needle devices are undesirable, a single fine needle should be used connected with the negative pole, left in position no longer than absolutely necessary, and only current sufficient to blanch. The punctures may be closer together in such cases, but not so close as to coalesce. Where the nevus consists of small dilated vessels just below the surface it is often possible to tranfix the vessel and block it with bubbles of hydrogen, and so cut off the blood supply to the part; current just sufficient to do this is all that is required; several spots may be treated at the one operation. In angioma cavernosum either the monopolar method is employed with a platinum-iridium needle in the growth and attached to the positive pole, or an amalgamated zinc needle used in the same manner, or the bipolar method with both needles, positive and negative in the growth may be found preferable, especially where there is much hypertrophy. In the latter case the aim should be to insert the negative needle into or tranfix the supply vessel while the positive is in the redundant tissue. Greater current strength will be necessary in the case of cavernous nevus, but rarely should our meter register up to fifty m.a.

In no condition is the superiority of the electrolytic to other methods more forcibly demonstrated than in the treatment of cavernous angiomata of the orbit, eyelids, cheeks, nose or lips.

Hemorrhage is not usual after electrolysis; should it occur pressure will usually suffice to arrest it. After operation a flexible collodion dressing will usually be found the most convenient. A second operation when necessary should not be performed until healing of the preceding is complete.

The temptation is usually in the line of too vigorous attack, but with electrolysis a good motto is, "Better do too little and repeat than too much and repent."

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## A CASE OF PRIMARY MUSCULO-SPIRAL PARALYSIS WITH NERVE SUTURE.\*

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*Gentlemen,*—The patient upon whom I shall operate to-day presents an unusually interesting condition. He is a painter, forty-five years old. His previous health has always been good. Six months ago he fell twelve feet from a scaffold and suffered a fracture of his left humerus. He was taken to one of our large hospitals and his arm was dressed in the usual manner. Now here comes an important point, which will be dwelt on later, viz.: The patient claims that immediately following the accident his left fore-arm was paralyzed to the extent that he could not extend the hand. After about six weeks his dressing was removed. Bony union had taken place, but he suffered great disability. His elbow was stiff, as was also the wrist joint, but more particularly did he notice an absolute inability to extend the left hand and fingers. In fact, he had very little motion in wrist or elbow at first.

I first saw him three months ago, which was three months after his injury. His condition at that time was as follows: The fracture was firmly united and the bones were in perfect relative position. At the junction of the lower and middle thirds of the left humerus a somewhat fusiform thickening could be felt corresponding with the seat of fracture. The elbow was freely movable.

I will say that the stiffness of elbow first complained of was the usual one following retention in splints. The left wrist seemed to be somewhat enlarged and free motion was somewhat restricted, especially complete extension. There was a typical wrist drop and much atrophy of the muscles above and below the elbow. There was an area of anesthesia of outer side of left fore-arm, involving the upper two-thirds. At that time, three months ago, a diagnosis of primary musculo-spiral paralysis following fracture of the humerus was made. The question arose as to treatment. Here was a case three months after injury, with absolutely no signs of any improvement. Was there any hope, after this lapse of time, of regeneration? What could be accomplished by operation?

At this point, I will refer to the causation of musculo-spiral paralysis after fracture of the humerus. The nerve as it passes down in the musculo-spiral groove is especially liable to be in-

\* A Clinical lecture delivered at the Chicago Polyclinic, March 8, 1905.

volved in fractures located as in this case, namely, at the junction of the lower and middle thirds of the shaft, or in the middle third. These paralyses are classed as primary and secondary. The primary are those in which, at the time of the accident, a complete interruption of continuity occurs. Either the nerve is completely cut across, or is so badly crushed that only the connective tissue is left at point of injury. The primary paralyses are evident immediately after the accident.

The secondary paralyses are such as become apparent about the time the dressings are removed, namely, after four or six weeks. How are they produced? They are explained on the basis of nerve pressure by callus and scar formation, stretching of the nerve over a sharp border of bone, partial laceration of the nerves by spicule of bone or possibly pressure on the nerve by one of the fragments.

You recall that the patient claims to have had the paralysis immediately after the injury. I therefore took it for granted that he had a "primary paralysis." If that be true, he probably had a serious nerve injury, or possibly complete division. Why? Because three months after injury his paralysis had not improved in the least, whereas, were it merely a contusion there would be, in all probability, some signs of repair after three months. Three months ago I advised an operation. He would not consent at that time. He was later advised by some excellent surgeons to wait. He did so, and I lost sight of him for a long time. He finally presented himself again, tired of waiting for improvement which did not begin, and ready now for an operation.

How long should one wait in these cases before resorting to operation? If the nerve involvement seems to be secondary, namely, appearing after four or six weeks—if there is only a paresis—if there soon develops evidence of improvement, then one should wait three months or more, as long as there is steady improvement. Don't operate while the condition is getting better.

However, if there is a primary paralysis, evident at the time of injury, which does not improve as weeks and months elapse, which after three months shows absolutely no sign of improvement from a complete paralysis—in such cases I would not advise waiting longer than three or four months (from the time of injury).

This case is one of the latter variety: in fact, it is a question whether the favorable time for operation has not been passed, it being now six months after the primary injury. He now displays a complete wrist drop—he has no extensor function of the forearm and fingers. There is considerable muscular atrophy. An area of anesthesia involves the outer aspect of forearm.

One of the essentials to the success of the operation is asepsis.

Even with a perfect technique, if this wound becomes infected the whole operation will be a failure and a future operation will offer very little hope. You realize the importance of this feature of asepsis as relating to this man. We hope to restore his arm to functional activity, and that means much to a laboring man. One misstep in cleanliness will jeopardize the success of the whole operation. We must be even more careful here than in an ordinary laparotomy; whatever infection gets into this wound is going to start trouble; there is no tolerant peritoneum to carry much of it away.

*Operation.*—A longitudinal incision is made three inches long at outer aspect of arm over the seat of fracture. The soft parts are separated along the inter-muscular septum and the bone is soon encountered, owing to the great atrophy of the soft parts. I will look for the distal end of the nerve first and trace it up to the callus. It is readily found and traced upwards until it reaches this point, where it seems to be firmly implanted in the callus. I will now chisel away the callus in the endeavor to follow the nerve up, and will try to preserve as much of it as possible. I find, however, on chiselling, that the nerve ends abruptly, just within the callus. I am now satisfied that the nerve has been completely severed, and we must look for the proximal end. We will start above and now work downwards towards the callus. It seems to have taken considerable more searching to find the upper end than the lower, but here we finally have it, and will follow it down. I am carefully dissecting it free from the normal groove and the surrounding tissues. One must be careful not to handle it roughly. Now we are arrived at the callus, and you will observe that the nerve enters a foramen in the callus, just like a nutrient artery. I will now chisel away the roof of this bony canal and see how far the nerve passes in. Great care is necessary, for if the chisel should slip I might sever the nerve, and we are anxious to preserve as much of it as possible. I have now uncovered about an inch of bony canal, and have arrived at a point where the nerve seems to terminate. The latter is not adherent to this canal, as you see I am able to carefully lift it from its bed with a probe. The end of the nerve tapers to a point.

Now that we have found the nerve to have been completely severed and have liberated its buried ends, what next? How far are the ends separated from one another? With the arm extended, the ends approximate within one-half inch, without being drawn together. On flexing arm to right angle, however, the ends can be made to touch without being held together.

However, in order to suture, we must reset the ends so as to obtain a fresh section for apposition. I will, therefore, remove

one-eighth of an inch from the distal end and one-quarter inch from the proximal, it being necessary to remove the tapering end. This trimming, of course, separates the ends somewhat more, but with the arm bent, you see they can be brought together without any tension. We will now suture the ends together, using two through and through fine catgut sutures and a fine round needle. We tie the sutures just tight enough to bring the cut sections together without tension or overlapping. You see that the approximation is nice and even. We will now have the constrictor removed and see if there is any bleeding. Some oozing occurs, which is controlled by pressure. The wound will be repaired by uniting the muscles with a few buried catgut sutures, and the skin with silkworm-gut. The arm will be immobilized and dressed at right angles. I wish to thank my friend, Dr. Hosmer, for his valuable assistance and advice during this operation.

Now, to recapitulate. It is evident that we were justified in advising an operation when the patient was first seen. There is no doubt that this is one of those rare cases of complete division of the nerve at the time of injury. The patient stated that he had the wrist drop immediately following the accident. After three months and after six months there was absolutely no sign of improvement, and from the condition we found there never would have been any, because the ends of the divided nerve were separated by at least a centimetre of callus. It has thus been shown that nerve suture was the only thing that could possibly have offered any hope of restored function.

How long should the arm be dressed in a flexed position? Theoretically, long enough for the divided end to have united by fibrous tissue and be capable of resisting slight traction. I would say about one month.

What have been the results following operative treatment of musculo-spiral paralysis? The results, as seen from published cases, have been generally good, and justify the operation in cases where there is no improvement after a reasonable time, or in cases which are getting worse, as regards paralysis, instead of better.

How long does it take for function to be restored? In those cases where healing has been perfect, we may look for signs of improvement after a few months, but it may take six months, or longer, before much function is regained.

*Post-Operative History.*—The wound healed by primary union, without any reaction or swelling. Sutures removed at end of one week. The arm was dressed flexed at a right angle for four weeks and then gradually allowed to resume its extended position and slight motion allowed. Massage was also employed. Two months after the operation there seemed to be some slight restoration of motion.



# The Canadian Journal of Medicine and Surgery

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## Editorials.

### THE DIATHESIS OF AUTO-INFECTION.

IN an article entitled "The Diathesis of Auto-Infection," A. Gilbert, Professor of Therapeutics in the Paris Faculty of Medicine, discusses the important question of auto-infection. He shows the great number of microbes which inhabit the small intestines, stomach and colon. Though less infected than the

small intestine, the colon contains so many microbes that the number eliminated with the feces every day amounts to twelve or fifteen billions (a billion, according to the French and American method of numeration, being a thousand millions). Infection of digestive origin is not limited to the intestinal canal, properly so called; it extends to the little channels which open into its cavity. Thus Steno's duct is invaded from end to end by the microbes of the mouth. All the extra hepatic biliary passages, the hepatic and cystic ducts, the gall-bladder and ductus choledochus are inhabited by duodenal microbes.

The exit of the pancreatic duct is similarly deflowered. The appendix vermiformis is tenanted by the microbes of the cecum. In these different conduits multiple species of microbes are present at the same time. The aerobic ones do not last very long; the anaerobic microbes, on the contrary, penetrate deeply, and are the only ones discovered at a great depth. The innumerable germs which inhabit the digestive tube and the canals which open into it, are a double source of danger to the health and life of man through the poisons which they elaborate (auto-intoxication), and the infections which they are ever ready to cause.

Professor Gilbert next discusses the question of auto-infection. We shall not follow him entirely in his learned *exposé* of the question, but shall content ourselves with a presentation of the chief points of his argument.

He premises by stating that no one can tell in what the diathesis of auto-infection consists, any more than one can say in what the predisposition to infection by an exogenous microbe, the bacillus tuberculosis, consists. It is certain, however, that a predisposition to family and hereditary complaints exists, and that, outside of this influence, we can find no cause sufficient to explain the genesis of primary auto-infections.

Referring to the appendix vermiformis, he says that the close relation existing between the appendix and the peritoneum gives special importance to the cavity of the appendix. As a habitation for microbes and a factor in the production of peritonitis, it bears an analogy to the Fallopian tube; unlike it, however, it is a channel without a gland, and may be obliterated without serious consequences to the owner.

The list of disorders and morbid conditions attached to the

diathesis of auto-infection, directly or indirectly, is long: mucomembranous enteritis, appendicitis, hyperpeptic gastritis, diabetes mellitus, diseases of the biliary organs, hereditary jaundice, biliary lithiasis, biliary cirrhosis, acute and chronic jaundice, biliary flux, etc., gout and uric acid lithiasis, neurasthenia, melancholy, hypochondria, hysteria, asthma, migraine, hemorrhoids, ulcer of the stomach, splenomegaly, epistaxis of adolescence, hemorrhages and hemophilia, continued and intermittent albuminuria, melanoderma, xanthoma, vascular nevi (capillary and arterial), prurigo and urticaria, stomatitis, angina, articular rheumatism and acute and chronic muscular rheumatism.

He is careful to say, however, that the diathesis of auto-infection is not the only cause capable of producing these pathological conditions and morbid troubles. Thus, appendicitis may be of tubercular origin; diabetic sclerosis of the pancreas may be of tubercular or syphilitic origin; biliary lithiasis, biliary cirrhosis, catarrhal jaundice may be started by the exogenous bacillus of Eberth; gout may arise from lead poisoning; multiple intoxications, acting on a predisposed soil, may provoke hysteria; asthma may be of uremic origin; nephritis and albuminuria have most complex origins, etc. What he does hold to is, that primary auto-infection plays a considerable, and often a preponderating, part in the production of the conditions and disorders in question. In every case it is not easy to affirm it; but, if a disorder is of spontaneous origin and hereditary, while the other possible causes are wanting, he feels justified in ascribing it to auto-infection.

Of all the diseases mentioned, appendicitis most undoubtedly springs from auto-infection. The microbes met with in this disease are just the same as those which reside normally in the appendicular canal. Professor Gilbert says: "Nothing is easier than the experimental realization of appendicitis by utilizing one of the normal hosts of the appendix, viz., the bacillus coli, on condition that the organ has been previously subjected to a preparatory treatment which favors infection."

The auto-infectious origin of biliary lithiasis is equally well established. From a study of biliary calculi taken from seventy patients who had gall-stone disease, Gilbert has shown that in over a third of the cases the calculi contained micro-organisms in

their centres, dead when the concretions were old, living when they were recent. Moreover, the germs found in the calculi were those which normally inhabit the bile. The study of bovine lithiasis has furnished identical conclusions. Co-operating with Fournier the author has reproduced the disease in bovines, that is to say, by the injection of the bacillus coli into the gall-bladder of a bovine, he has succeeded in obtaining perfectly formed biliary calculi, thus establishing the auto-infectious nature of biliary lithiasis. Gilbert considers biliary calculi as an expression of a defensive reaction on the part of the economy, analogous to thrombosis, the object and effect of which are the seizing and englobing of the pathogenic agent.

Gilbert claims to have proved the *direct* pathogenic action of digestive germs in the causation of biliary lithiasis, biliary cirrhosis, sclerous angiopancreatitis and appendicitis. To this list should be added, he thinks, most probably, mucio-membranous enteritis, acute or chronic jaundice, hereditary cholemia, reactive biliary fluxes, stomatitis, anginas, and acute articular rheumatism. Other pathological conditions flow *indirectly* from the action of the same germs. Thus hemorrhoids, ulcer of the stomach and splenomegaly are consequences of portal hypertension; gout, diabetes, albuminuria, hemorrhages, prurigo, urticaria, nervous disorders, neurasthenia, melancholia, hysteria, asthma, megrim are connected with functional hepato-pancreatic disorders, with jaundice or other form of intoxication.

Although the pathological physiology of these diseases is obscure, Professor Gilbert is confident that the different diseases which he traces to primary auto-infection present a close relationship, and that they form a natural family.

He thinks the arguments in favor of the existence of an auto-infectious family of diseases are just as strong as those adduced in favor of the existence of an arthritic, a bradytrophic or a herpetic family of diseases. The links uniting the different members of this immense family are more or less close or loose, according to the way one considers them; those which exist between the different diseases of the biliary passages are particularly close, and for this reason it is necessary to reserve a special place for the biliary family in the auto-infectious family of diseases.

The diathesis of auto-infection often exerts its effects broadly, in different members of the same family, or united in one member of a family we see a regular sequel of conditions or pathological disorders produced, which prove to be a simultaneous attack on the walls of the digestive tube and its different annex canaliculi. Muco-membranous enteritis, appendicitis, hyperpeptic gastritis, biliary lithiasis, diabetes, etc., succeed each other and evolve on the same family soil or in an individual who inherits that soil.

In other instances it appears that the diathesis of auto-infection tends to localize its effects, so much so that in certain families the appendix, or the pancreas, or the tonsil appears to be particularly vulnerable. In papers published in collaboration with Lereboullet, Gilbert has particularly insisted on the hereditary origin of biliary diseases, which recognize as anatomic-pathological basis, angiocholecystitis, and as pathogenic starting point, auto-infection; that is to say, the biliary diathesis and the biliary soil. Gilbert says, that this narrowing of the diathesis of auto-infection may be more apparent than real. He has examined the biliary and pancreatic passages of patients, who perished after operations for appendicitis, and has found inflammatory lesions in evolution, sometimes complication with sclerosis and sometimes not. Inversely in patients attacked by angiocholitis he has proved the existence of angiopancreatitis and appendicitis. These facts, he says, "should be compared with observations by himself and Lereboullet concerning a patient attacked by hereditary cholemia, who succumbed to an attack of acute rheumatism at twenty-seven years of age. The observers found at the post-mortem lesions of chronic angiocholitis, with, at certain points, complete obliteration of the biliary passages; the pancreatic passages presented at the same time inflammatory lesions, and there existed also a peri-acinose, pancreatic cirrhosis; finally a hypertrophic, follicular appendicitis completed the picture."

Looked at from the standpoint of pure histology, such *microbic polycanaliculites* are capable of menacing life immediately, if the peritoneum should become interested, or capable of sapping the powers of life slowly, by the toxic infection which they cause, as well as by the perturbation which they produce in the functions of the two most important glands in the economy.

J. J. C.

## CASUALTY STATISTICS OF THE CANADIAN STEAM RAILWAYS.\*

In the January number of this journal the casualty statistics of the United States for the year ended June 30, 1903, and the year ended June 30, 1904, were discussed. In the present article similar statistics, relative to Canadian steam railways, and covering the same periods of time, are presented.

### STATISTICS OF DEATHS AND INJURIES CAUSED BY STEAM RAILWAYS IN CANADA FOR THE YEAR ENDED JUNE 30, 1903, AND THE YEAR ENDED JUNE 30, 1904.

|   | 1903       | 1904       | Increase per cent. |
|---|------------|------------|--------------------|
| Passengers carried.....   | 22,148,742 | 23,640,765 | + 6.73             |
| Number of employees....   | ?          | ?          | ....               |
| Total deaths.....   | 420        | 395        | - 6.32             |
| Total non-fatal injuries..  | 1,453      | 1,405      | - 3.41             |
| Passengers killed.....  | 53         | 25         | - 112.             |
| Others killed.....  | 181        | 178        | - 1.68             |
| Employees killed.....   | 186        | 192        | + 3.22             |
| Passengers injured.....   | 258        | 233        | - 10.72            |
| Others injured.....   | 250        | 259        | + 3.60             |
| Employees injured.....  | 945        | 913        | - 3.50             |
| Passengers killed in 1903 to passengers carried as 1 to 417,900 ; |            |            |                    |
| in 1904 as 1 to 945,630.  |            |            |                    |
| Passengers injured in 1903 to passengers carried as 1 to 85,847 ; |            |            |                    |
| in 1904 as 1 to 101,462.  |            |            |                    |

In reference to the first item in the table, number of passengers, it will be observed that the increase for 1904, viz., 6.73 per cent., is satisfactory. Opposite the second item, number of employees, a note of interrogation has been placed. This is intended as a question addressed to the statisticians of the Department of Railways, Ottawa, asking why they do not imitate the methods of the Interstate Commerce Commission, Washington, who in their annual reports give the number of the employees of the railways of the United States. The aggregate of deaths on Canadian railways for 1904, viz., 395, shows a decrease of 6.32 per cent. compared with the figures for 1903, and the aggregate non-fatal injuries, viz., 1,405, a decrease of 3.41 per cent. for the same period. The aggregate of passengers killed in 1904, viz., 25, shows a decrease below the figures for

\* A copy of the Railway Statistics of the Dominion of Canada for the year ended June 30, 1903, and a copy of the Railway Statistics of the Dominion of Canada for the year ended June 30, 1904 were obligingly sent us by L. K. Jones, Secretary in the Department of Railways and Canals.

1903 of 112 per cent. There is also a decrease in the number of "Others" killed, amounting to 1.68 per cent. Equally favorable comment cannot be made on the fatal casualties among the employees, of whom 192 were killed, an increase of 3.22 per cent. over the figures for 1903.

Among passengers 233 persons received non-fatal injuries, a decrease of 10.72 per cent. from the figures of 1903. Among the class "Others" more were injured in 1904 than in 1903, the percentage of increase being small, viz., 3.60. Fewer employees were injured in 1904, the total number being 913, a decrease of 3.50 per cent.

These statistics of 1904 show an immense improvement over the figures of the preceding year. Only two unfavorable percentages can be noted, a small increase in the number of employees killed and a small increase in the number of "Others" injured. All the other casualties show decreased percentages. When this fact is considered, along with the associate fact that the Canadian railways did a larger passenger business in 1904 than in 1903, the very general decrease in fatal and non-fatal injuries reported as occurring in 1904 on these railways is very gratifying.

Among passengers, 8 deaths and 130 non-fatal injuries resulted from collisions. On the other hand, 7 deaths and 57 non-fatal injuries among them were caused by jumping on or off trains or engines when in motion; 5 were killed by walking, standing or lying on the track; 5 were killed and 17 injured by falling from cars or engines. It will thus be seen, that 32 per cent. of the deaths and 55 per cent. of the injuries which occurred among passengers on Canadian railways in 1904 were due to collisions—agencies over which passengers have no control.

Of the 192 deaths and 913 injuries occurring in 1904 among the employees of Canadian railways, 58 deaths and 132 non-fatal injuries resulted from collisions. On the other hand, 52 were killed and 67 injured by walking, standing, lying or being on the track; 33 deaths and 130 non-fatal injuries were caused by falling from cars or engines; 11 deaths and 164 non-fatal injuries by coupling cars; 7 deaths and 84 non-fatal injuries by jumping on or off trains or engines when in motion; 6 deaths and 30 non-fatal injuries by being struck by engines or cars at highway

crossings; 3 deaths and 50 injuries occurred when at work near the track. The responsibility for a collision may rest with the trainmen, who disobey orders, ignore or fail to see block signals, or it may be traced to the negligence or error of some other employee of a railway. No data are given, in the Canadian railway statistics, to enable the reader to fix the responsibility. A review of the other causes of death or injury among railway employees shows that most of them are inherent in the hazardous nature of their occupations. In most cases the railway companies are not responsible for death or injury caused to employees by falling from cars or engines. Occasionally the responsibility does rest with the railway company. Thus, we learn that a brakeman while working on a Canadian railway, fell from a freight car in front of a moving locomotive, thereby sustaining a fracture of a leg. This injury necessitated amputation of the injured leg, and owing to accumulated misfortune the poor fellow has become insane. This accident was primarily caused by the fact that one of the rungs of the ladder by which the brakeman descended from the roof of the freight car was rotten, tore away in his grasp and allowed him to fall on the track in front of a moving locomotive. Again, jumping on or off a train or engine may cause a death or injury for which the killed or injured employee is responsible; but, on the other hand, jumping off a train may be compulsory, as when it is done to escape a worse alternative, viz., collision, for which the trainman is not responsible.

The deaths of "Others" numbered 178, the injured of this class, 259. Of these 106 were killed and 93 injured when walking, standing, lying, or being on the track. The great majority of these were probably trespassers or wanderers. Nine deaths and 14 injuries occurring from collisions or by trains thrown from the track; 7 deaths and 30 injuries by jumping on or off trains in motion; 8 deaths and 14 injuries by falling from cars or engines were in the majority of instances referable to the same classes. On the other hand, 36 deaths and 20 injuries among "Others" caused by being struck by engines or cars, at highway crossings, probably, occurred among non-trespassers.

The following table compiled from data in the official reports exhibits some features of the relative proportions of the railways



of the United States and Canada for the year ended June 30, 1904, with the casualties for that year:

|                            | Total<br>Passengers | Total mileage includ-<br>ing Sidings, Double<br>Tracks, etc. | Total<br>Passengers<br>Killed | Total<br>Passengers<br>Injured |
|----------------------------|---------------------|--|-------------------------------|--------------------------------|
| United States Railways.    | 715,419,684         | 297,073,334  | 441                           | 9,111                          |
| Canadian Railways. . . . . | 23,640,765          | 23,701,000   | 25                            | 233                            |

Thus during 1904 the United States had 12.53 times as many miles of track, double track and siding as Canadian railways; 30.26 times as many passengers; caused 17.64 times as many deaths, and 39.10 times as many injuries to passengers as the Canadian railways.

J. J. C.

### TO SUPPRESS SMALLPOX IN ONTARIO.

THAT smallpox will not spread among a vaccinated population may be regarded as a truism. Witness Germany, in which no epidemic of smallpox has occurred since 1871, when the disease was brought in by French prisoners, although a few scattered cases have appeared occasionally. That smallpox will spread rapidly among a population, many of whom have not been vaccinated, is equally true. Witness the frequent outbreaks of smallpox in Ontario.

The public vaccination Acts of Ontario and the smallpox regulations issued by the Provincial Board of Health are good on paper, but, practically, are inefficient. A health law which is not enforced should be repealed or amended.

We would suggest the following law respecting vaccination in Ontario:

(1) The parents or guardians of any infant born in any city, town, incorporated village, or township in Ontario shall, within four months after the birth of the child, procure the vaccination of the child by some legally qualified physician.

(a) This section shall apply to all children under the age of four months becoming resident in a municipality, and such children shall, for the purpose of the said section, be considered as children born in the municipality at the date that they become resident within it.

(2) Eight days after the child has been vaccinated its par-

ents or guardians shall procure from the vaccinator a certificate that the vaccination has been successful, or that it has failed to take.

(a) If the primary vaccination has failed to take, it shall be incumbent on the parents or guardians of the said child to present the child within three months to a legally qualified physician to be vaccinated.

(b) If, after a second or a third trial, the said child proves to be insusceptible to the vaccine disease, it shall be the duty of the vaccinator to issue to its parents or guardians a certificate stating the facts of the case.

(3) In all cases in which a certificate of such vaccination (successful or unsuccessful), is issued by a physician, he shall also send a duplicate copy of the same to the clerk of the city, town, incorporated village or township, in which the parents or guardians of the vaccinated child reside.

(4) It shall be the duty of the said clerk, on receipt of the said duplicate copy of a vaccination certificate, to record the name and address of the parents or guardians of the said child, and also the condition of the child as to vaccination.

(5) Any person residing in Ontario, who has reached the age of twenty-one years, whether previously vaccinated or not vaccinated, shall be vaccinated by a properly qualified physician.

(6) Eight days after vaccination he shall procure a certificate from the physician who vaccinated him, showing that the operation has been successful, or that it has been unsuccessful.

(7) It shall be the duty of any physician, practising in Ontario, who has vaccinated, successfully or unsuccessfully, any adult of twenty-one years of age or over that age, to send a duplicate copy of the certificate of vaccination to the clerk of the city, town, village or township in which the vaccinated person resides.

(8) It shall be the duty of the said clerk to record the name, address and condition as to vaccination of every adult person, the certificate of whose vaccination is sent him by the physician who has performed the operation.

(9) It shall also be the duty of every clerk of a city, town, incorporated village or township in Ontario to send, by registered letter, every year to the County Crown Attorney of the county in which he has jurisdiction, a report showing the names

and addresses and the conditions as to vaccination of all infants or adults residing in the municipality in which he has jurisdiction.

(10) It shall be the duty of the County Crown Attorney in every county in Ontario to take cognizance of all vaccination reports from the clerks of cities, towns, incorporated villages and townships in the county for which he has jurisdiction, and also to take action before the police magistrate or other magistrates of the municipality against delinquent parents or guardians of infants, or against adults, who have violated the requirements of this vaccination Act, a fine of not less than \$5 being imposed on conviction.

Speaking generally, in providing for the vaccination of the people of Ontario, the Act will very necessarily have to make it possible that the poor shall receive free vaccination at the cost either of the municipality or the State. This could be done, through the hospitals of the Province, by way of increasing their subsidy, or by the setting apart of a special vaccination station, the former being preferable in the cities and towns.

Again, the question of providing vaccine of a guaranteed purity by the State is a factor to be considered in the drawing up of the Act, for the State which compels vaccination should provide a guaranteed and standard article for the use of the medical profession, and in Ontario some provision could be made at the Agricultural College, Guelph, for the production of the article.

Some sanitarians prefer to have the secondary vaccination performed before the wage-earning period of life is reached, as objections are raised, by both employers and employees, to the performance of the operation, from the fact that there is a possibility of the employees having to give up work. The objection has some force; but, if vaccinating were to go on systematically as the period of majority is reached, a large number of persons would not require to be vaccinated at the same time, such as occurs when an outbreak of smallpox happens.

It has also been suggested that it should be obligatory on the local Board of Health to furnish the Crown Attorney with the necessary information, and that it should then be obligatory upon him to forthwith prosecute, and failing this, he should inform the provincial authorities of the negligence of the local board, and

he then should receive instructions from the central health authorities to make the necessary prosecutions.

Owing to the remissness of local boards of health in dealing with ordinary matters of hygiene, we think that the duty of reporting the condition of a municipality as to vaccination should be left in the hands of the municipal clerk. He should certainly receive fees for the additional work required of him. J. J. C.

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### BRITISH MEDICAL ASSOCIATION.

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ON the afternoon of January 3rd, 1906, a large number of Toronto physicians availed themselves of the kindly invitation given by the president-elect of the British Medical Association, Dr. R. A. Reeve, to meet Prof. Wm. Osler at a five o'clock tea, in the Ontario Medical Library Building. At the request of the host, Prof. Osler made a few remarks anent the coming Toronto meeting of the British Medical Association, indicating that the main divisions of the work of the meeting would be under the heads of physiology, pathology and pharmacology, the place of honor being given to physiology.

Alluding to the financial obligations which would fall on the Toronto physicians, who would be called on to subscribe to a guarantee fund to support the meeting, he expressed the view that the younger men would, no doubt, wish to contribute, but would be unable to do so as freely as others, who were in the hey-day of practice and receiving large fees.

Referring to the social side of the meeting, he thought it would be *apropos*, if invitations to accept private hospitality (viz., to stop at one's house) were sent directly by a lady and gentleman in Toronto to a lady and gentleman in London, or other part of the British Isles, rather than that the invitation should be sent through the Toronto local committee. In his opinion, it was likely that three or four hundred members, some of whom would be accompanied by ladies, would cross the ocean to attend the meeting. He thought that everything indicated, as far as one could judge in advance, that the coming Toronto meeting would be one of the most important in the annals of the British Medical Association.

J. J. C.

### TORONTO'S NEW MORGUE.

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For years, since the old morgue has been uninhabitable for either the living or the dead, Toronto has grown accustomed to seeing a weary coroner with his jury of "good men and true" wandering about, looking for rest for the soles of their feet. They knocked almost in vain even at the doors of the big City Hall. All dignity was left behind, and soon, except for the courtesy afforded them of an up-stairs room in "the nearest hostelry," or the same courtesy at the hands of an undertaking establishment, their sessions would have had to be held possibly on a street corner!!! And this is Toronto the Good, forsooth!! However, the tide has at last turned, and this state of affairs will soon be remedied. A suitable site has been purchased on Lombard Street, we understand, near the fire hall. Plans are being drawn by the city architect which promise a very fine morgue. Also, it is intended that suitable stabling accommodation will be provided there for the city ambulances and wagons for carrying the dead. The cost, it is estimated, will be \$20,000. But surely the Board of Control will not in this instance pursue a picayune policy. As we have waited for a number of years for a new morgue, rather than spoil a building which should be a credit to our city, it is better that even now there be sufficient delay to get out plans, on the completion of which there will be no cause for regret a few years hence. The city architect should consult the coroners of Toronto, and be prepared to take suggestions from them as to what will constitute a thoroughly equipped morgue, and suitable for a city of now over 300,000 people. The building must provide not only for two or three inquests to be conducted simultaneously, but of sufficient size to permit of coroners' private rooms and lavatories, more than one court room, two autopsy rooms, one or two identification rooms, and a thoroughly sanitary morgue room with slabs for not less than twelve bodies. The latter must have a most complete system of ventilation and drainage, spraying apparatus, hot and cold water, washrooms, cupboards for keeping aprons, rubber gloves, post-mortem operating cases, disinfecting solutions, etc. Particular attention should be given to facilities for the reception of corpses which are in an advanced

state of putrefaction, as frequently occurs when bodies are found in Toronto bay during the hot weather. They should be brought there in an air-tight, wooden shell, which on arrival would at once be submitted to a deodorizing process by, say, formalin gas, after which they would be placed in the identification room to await the autopsy, that room being kept at a sufficiently low temperature to prevent the condition of mortification going any further. Another suggestion would be that the coroners' rooms and court rooms be placed in, if possible, a separate wing, and away from the autopsy and identification rooms, the odor of which at the best may not be very agreeable. We look forward to the new morgue being similar to the one Paris used to boast of, but of course fully equipped with every new idea incorporated in the architectural and scientific arrangement, and suitable for Toronto's needs, no matter if the population were to double in number.

W. A. Y.

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#### THE NEW "NERVOUS WARDS" AT TORONTO GENERAL HOSPITAL.

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WE are pleased to notice that the work of transformation of Dr. O'Reilly's late residence at the General Hospital into nervous wards is being rapidly pushed forward. In this way a modest beginning will be made to a work which is already advanced in other countries, and will, it is hoped, lead to more extensive accommodation for the treatment of these cases when the plans for the new hospital are completed. To the trustees of the General Hospital belongs much credit for their generosity in providing the building, and their broadmindedness in establishing the first wards for the purpose in Canada. The liberality of the present Government in placing the necessary funds for the alterations at the disposal of the trustees is an evidence of the active interest taken by the Honorable the Provincial Secretary in all matters pertaining to the welfare and advancement of all branches of his department. The able assistance given by the profession of Toronto to this good work, as shown by the large deputation which waited on the Government in July last, in support of the suggestion of Dr. Campbell Meyers to introduce these wards into all general hospitals, has already borne excellent fruit. It is hoped

that in another month these wards will be thrown open to the poor, and that every facility will thus be offered to those who are unable to pay, to procure such treatment as can now be obtained only by those in better circumstances.

To the medical students the opening of these wards will be a great boon, as they will allow clinical instruction on this class of cases to be given in a manner which is at present impossible.

The Government, the Trustees of the Hospital, and also the profession are to be congratulated on the successful inauguration of this first step, the effects of which will continue to increase and multiply as long as the poor are with us. W. A. Y.

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### THE MEDICINAL VALUE OF SURROUNDINGS.

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“ All things in earth and air  
 “ Bound were by magic spell  
 “ Never to do him harm ;—”

Music, “ Heavenly Maid,” has charmed since the world began, but perhaps only during the last decade have her possibilities been realized in the world of medicine. In the United States it is a custom now in some of the asylums for the insane to have a band give matinee and evening performances twice a week, and many alienists agree that, especially in the case of nervous subjects, the effect of good music is very beneficial. Upon those mentally sound, but imprisoned in hospitals owing to bodily infirmities or as the result of severe surgical operations, “ a low, sweet voice ” in an attendant has a soothing tendency that to one in pain is a great comfort. A year ago, Dr. Allan Baines, in his address to the graduating nurses of the training school of the Toronto General Hospital, laid great emphasis upon the nurses using every means to cultivate well modulated voices, and to their paying particular attention to expression in reading aloud. Speaking of the average modern voice the *Queen* says: “ At present the voice is relied upon to such an extent that gesture has become a lost art. The uplifted arm creates astonishment; nobody is startled by the uplifted voice. People go about speaking in tones that would be useful for warning ships on foggy nights; they discuss private matters in the tones adopted by some tropical

bird at the Zoological Gardens; they give details of their health in the manner of the lecturer at Colonel Cody's entertainments."

From the human or speaking voice to the voice divine—uplifted in song is not a far cry. The voice perfectly attuned, expressing itself in song, preferably in a sweet ballad with hardly a minor note in it, is beyond a doubt commendable, soothing and elevating to all classes of patients, and was tried with wonderful success in our city during the Yuletide season. The profession at large have heard many expressions of gratefulness from the medical men attendant upon the several hospitals in Toronto, for the kindly thought that prompted four ladies, perfect in their art, to offer their services as a quartette and charm away a weary hour in melody divine. Each song as it floated out over the long wards brought healing in its wings. In this day when the putting up of medicine is almost as artistic as the arrangement of bonbons in a faucy box, the incense arising from the perfume of a flower—and the therapeutic value of color have been recognized, perchance the medical men of to-morrow may see "the half that has never been told" in environment, and Belasco-like, add to their medical and surgical skill the wizard's touch of atmosphere.

W. A. Y.

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### THIS TIME A DOWIEITE.

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AGAIN has come before the public the story of a life sacrificed by the absurd fanaticism of a member of a faith-healing cult. At the Whitby (Ont.) Assizes on January 9th, "for aiding, counselling and abetting one Marshall Harmon, of Victoria Corners, township of Brock, in neglect in securing medical assistance during his wife's illness, Eugene Brooks, of Toronto, a Dowieite leader, was sentenced by Judge McCrimmon to six months in the Central Prison with hard labor. Harmon's wife died last summer of acute dropsy after confinement. Harmon would not let the neighbors help her, but sent for High Apostle Brooks from Toronto. Brooks prayed for a while with the unfortunate woman, and was then driven to the station ten miles distant by Harmon, the woman being left alone in the meantime. While Harmon was absent Mrs. Harmon's brother and sister chanced to visit her. They at once sent for a doctor, but it was too late.



Harmon was sentenced to a year's imprisonment, and when Brooks came up for sentence he admitted telling Harmon that if he depended on the arm of flesh the Almighty would not help him. Brooks delivered a half hour's address to the court. He was scathingly rebuked by the judge, who remarked that Brooks had retained a counsel in the flesh to defend him."

This judgment, meting out to the husband one year's imprisonment and to the one who aided and abetted his crime a six months' term, is interesting, as it is, we think, one of but six convictions as yet recorded under subsection 2, section 210 of the Criminal Code, as follows: "Everyone who is under a legal duty to provide necessaries for his wife, is criminally responsible for omitting without lawful excuse so to do, if the death of his wife is caused, or if her life is endangered, or her health is or is likely to be permanently injured by such omission." W. A. Y.

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#### **"ONE OF THE MOST IMPORTANT CONVENTIONS EVER ASSEMBLED IN TORONTO."**

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THE following editorial, under the caption, "The British Medical Association," in the *Globe*, Toronto, so tersely and well expresses the sentiment regarding the approaching meeting of the British Medical Association, that we reprint it in full:

"During the third week of August this year will take place one of the most interesting and important conventions ever assembled in Toronto. The time-honored and far-famed 'British Medical Association' will hold here its next annual meeting. The society is nearly half a century old, and during that long interval it has met outside of the United Kingdom only once, namely, eight years ago in Montreal. Whatever the reasons that prompted it to accept an invitation to Toronto, nothing but good can be the outcome on either side of the Atlantic. Certainly the occasion will be one of deep and widespread interest in Canada.

"Much of the success of the coming convention depends on the number in attendance. The membership of the association is very large, probably not less than twenty thousand, but only a limited percentage of the members ever attend the annual gatherings at home, and the proportion will probably be no larger here,

unless special attractions are offered. These are easily within our power if there is intelligent co-operation between the Government of the Dominion, the Government of Ontario, and the Corporation of Toronto. Success implies both work and expenditure, and far too much of each for a few to assume the whole burden. There must be an effective organization of all available forces to secure a creditable result, but that result will be easily worth both the effort and the cost.

"One obvious advantage accruing to this country from such a meeting will be the stimulus it is certain to give to the healing art and to preventive medicine. A very prevalent impression to the contrary notwithstanding, medicine is one of the more progressive sciences. New theories suggest new remedies, and very wide publicity is through a numerous array of medical journals given to every interesting case of treatment. Medicine is in fact cosmopolitan, and therefore we may expect the discussion at the coming convention to be more than ordinarily helpful and suggestive. Of greater importance than even the cure of disease is its prevention, and the meeting cannot fail to aid effectively in the promotion of sanitary science, which has already done much, and will yet do more, to alleviate human misery by diffusing among the masses a trustworthy knowledge of the conditions that propagate disease.

"An advantage of a more tangible, if not more practical character, will be the incidental advertisement this country will receive as the result of the convention. The members of the association are men of scientific habit and trained intelligence. They are accustomed to observe closely and reason accurately. Most of those who come will see Canada for the first time, though for not a few of them this will no doubt be a second or a third visit. In any case they will find material progress on every hand, and a concomitant improvement in social and educational conditions. We are extending old lines of railway and constructing new ones rapidly but intelligently. Our towns and cities are growing in population, but are taking better care of those who live in them. In both the older and the newer provinces agricultural operations are becoming every year more varied and more successful. We are beginning to give very serious and general attention to the preservation and propagation of valuable forest

trees. Our mineral deposits are becoming yearly more extensively known and more thoroughly worked. This great industrial development is sure to impress men characterized by the aptitudes and attainments of the veteran and successful medical and surgical practitioners of Great Britain.

"To no other class of visitors may we look with more assured confidence for intelligent appreciation and favorable mention. Medical practitioners enjoy to an exceptional extent the confidence of the whole community in which they practice their profession. What they have to say on their return home of our resources, our climate, our prosperity, our enterprise, our culture, our domestic life, our public spirit, and our social conditions, will be generally believed, and it will be easily worth more for propagandist purposes than months of hard work by paid Government agents and pecuniarily interested railway and steamship bookers. The opportunity is one that we cannot afford to ignore or even depreciate."

#### EDITORIAL NOTES.

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**Killed at Football.**—That more young men are not killed or injured when playing Rugby football appears to result from some happy chance, or else it may be due in part to the natural elasticity of youthful tissues. One who watches a number of young athletes tumbling over one another, sitting forcibly on one another and generally subjecting each other to very rough usage, may well wonder that so few cases of severe injury are reported after the games. The physical training received by the players may count for something, as a protective against injury. It may be also that the Rugby players do not try to hurt each other in the sport as boxers and wrestlers do, but strive to get possession of the ball, their muscular efforts being only indirectly spent on the bodies of their opponents. A good many minor injuries do occur, however, among football players, as doctors know, though the record rarely reaches the press. Occasionally a fatal injury is inflicted, as, for instance, the death of "Leo McNally, 24 years of age, who was injured in a game of football at Bridgeport, Conn., on Thanksgiving Day, and died December 7, 1905. McNally's back was broken in a mass play

and he became paralyzed from the waist down." In view of such severe injury and its fatal termination, favorable comment on the game is impossible. Rugby football is a brutal sport and should be denounced by physicians. Young men who go to college to become scholars and gentlemen should find some more elegant and less strenuous method of strengthening their physique than by engaging in uncouth struggles, which remind an onlooker of a "rough and tumble" fight at a lumbermen's dance. There is a tendency among all young animals to assault one another when they first meet. It is common in public schools and is rampant in colleges. At the University of Toronto the freshmen are "hustled" by the second year men and in more advanced years sporadic outbreaks of this anxiety to overthrow your neighbor are occasionally noted. Football teams from different colleges are not placed exactly in this situation, for they may have never met, until they join issue over the ball. However, the natural love of a struggle inherent in young men gains impetus, and mutual jealousy becomes inflamed to a high degree when rival football teams engage on the field of mimic war.

**Deaths and Injuries Occurring on American Railways.**—An editorial devoted to statistics of deaths and injuries occurring on the railways of the United States appeared in the January number of this journal. The large increase in casualties on these roads, during 1904, was thought to be due, in some instances to under-manning and overworking of the trainmen, or in other instances to an insufficient force of trackmen whose business it is to keep the road in good repair. This explanation throws the responsibility on the railway companies. It is only fair to add that railway casualties occur for which trainmen are directly responsible, because they first disobey orders, and then having caused the mischief try to shelter themselves behind some paltry excuse. Thus ten employees were killed and eleven train employees and eight passengers injured in the wreck of the "Overland Limited" on the Union Pacific Railway, five miles west of Rock Springs, Wyoming, December 7, 1905. The passenger train was run into head-on by a freight train. This freight train (an extra) was given an order before it left Rock Springs to meet four east-bound passenger trains, of which the "Over-

land Limited" was the last one at Ahsay, a siding five miles west of Rock Springs. The freight took the siding, waited until three trains had passed eastward, and then pulled out. When a mile and a half west of Ahsay it met the "Overland Limited." W. L. Park, General Superintendent of the Union Pacific Railway, stated that Conductor Roy Darrell and Engineer Brink of the freight train were responsible for the wreck, and that Conductor Darrell had admitted that he became confused as to the number of trains that had passed Ahsay. Possibly these employees and some of the crew may have slept at Ahsay, while the others may have been engaged in some absorbing pastime. To get over the tendency of overworked freight-train crews to go to sleep at sidings, it should be obligatory, under a heavy penalty, for the conductor to set a watch at a siding just as is done in military camps.

**Temper Powders.**—It is stated, in a London cable to the *New York Herald* that Sir Lauder Brunton recommends a powder of potassium bromide and other drugs for counteracting the effects of irritating occurrences or depressing news. The result of the treatment is thus described: "In place of being much worried and unable to turn attention to other things, a person feels as if he had slept over the bad news or worry, and is able to obtain relief by turning his attention to something else." It is also stated in the despatch that explosions of temper on the part of a member of the family, which may affect the health or happiness of the other members of the family, may be successfully treated by the administration of temper powders. This seems to be an easy way to prevent explosions of wrath, and may be tried as a temporary expedient, but is not radical enough. With all due submission to Sir Lauder Brunton, the best way to control bad temper, or preferably to prevent the temper from becoming bad in a considerable number of persons, is to prevent or relieve indigestion. Nervous exhaustion, overwork, pain are all well-known causes of outbreaks of temper. These latter causes are often so apparent, and the physical unfitness of the bad-tempered person so suggestive to those in his environment, that rest, good food, a glass of wine, or perhaps an opiate, are given with the happiest results. Explosions of bad temper in an arthritic

man often depend on another cause, and call for very different treatment. An arthritic man looks well, feels well, is an active worker, and consumes large quantities of meat; but at certain times, when he is beset with uric acid toxemia, gloom and despondency seize him, or he gives way to unreasoning and uncalled-for bursts of temper, and makes everyone in his immediate neighborhood uncomfortable. Instead of ordering temper powders for such a man, a physician should advise him to eat little or no meat, drink no wine, beer or liquor, eschew tea and coffee, and take muscular exercise regularly on an empty stomach. The patient may not bless the doctor at first; but, if he sticks to the anti-uric-acid regimen, he will recognize unmistakable signs of the soundness of the advice regarding abstention from certain foods and drinks—a sweeter temper, more complete self-control, even under trying circumstances, greater working power with less fret. His family and friends will recognize the change in the bad-tempered man, but will be loath to ascribe the happy result to the real cause, probably because the doctor's advice would go against the grain, if given to themselves. There are other forms of bad temper, for which moral treatment is necessary.

**Thiosinamine in Cicatricial Conditions.**—This substance is chemically allyl-sulpho-carbamide ( $C_4H_8N_2S$ ), and is made by heating together allyl mustard oil, absolute alcohol and solution of ammonia. It was first brought into notice in 1893 by Dr. Hans von Hebra, who used it hypodermically for lupus. F. Juliusberg, who used it with good results in lupus and in scleroderma, said that it sometimes produced malaise, fever, or a morbilliform eruption of the skin accompanied by itching. Lengeman (*Deut. Med. Woch.*, No. 13, 1904) reports two cases of palmar contraction which have been cured by it. In a third case of contraction of a finger of ten years' standing, a course of forty injections, combined with baths, massage and passive movements, resulted in great improvement. Hartz (*Deut. Med. Woch.*, Feb. 18, 1904) has noted an extraordinary action of this preparation in a case of fibrous stricture of the pylorus, with secondary dilatation of the stomach and motor insufficiency. Ernst (*Centr. f. Chir.*, April 9, 1904) observed a favorable influence on lympho-sarcomatous growths. These had occurred in the neck, and after removal had

grown again, and the scars became keloid. Thio-sinamine was used hypodermically in 10 per cent. strength at first in doses of 1 c.c., every second day rising to 2 and finally 3 c.c. The injections caused rapid disappearance, not only of the keloid formation, but also of the sarcomatous growths. After twenty-four injections the growths on one side of the neck had entirely disappeared, while elsewhere they had shrunk to three-quarters of their original size. Baumstark (*Berl. Klin. Woch.*, June 13, 1904) saw no good effect in five cases of carcinoma of the gastrointestinal tract. Similarly in seven cases of benign stricture the results by hypodermic treatment with thio-sinamine were almost negative. The method employed by most writers is hypodermic injection of a 10 or 15 per cent. solution, the amount used being  $\frac{1}{2}$  to 1 c.c. twice a week, when a 15 per cent. solution is used. When a 10 per cent. strength is used, it may be injected at first in doses of 1 c.c., every second day rising to 2 and finally 3 c.c. A solution of thio-sinamine in glycerine and water is preferred to an alcoholic solution, the injection of which is painful. The 10 per cent. formula used by Klemperer is: Thio-sinamine, 10 parts; glycerine, 20 parts; distilled water, 70 parts.

**Massage of the Nerves.**—Whatever the theory of the relief afforded in nerve pains by massage may be, it is generally recognized that the skillful application of a human hand is a fine agent for the relief of painful conditions of the nerves. Cornelius says on this subject, in *Therap. Monatsh.*, May, 1905, p. 227, that nervous influence circulates in the body along a closed circuit; that only at certain nodal points of the circuit can nervous impressions originate, which are thence transmitted to the circuit itself; and that a nervous impression once started from a nodal point always terminates in another nodal point. The nervous impression, which is first exciting and afterwards sedative in its effect, travels in the form of a wave. A mechanical action exercised at a painful point is capable of freeing it from pain for a certain time. Massage of the nerves by the finger is practised without the intervention of fatty bodies, so as not to blunt the tactile sensitiveness of the operator's finger. He seeks for all the nodal points of the painful area either by superficial or deep digital pressure. All these points, particularly the most sensi-

tive ones, are then massaged. At first the pain is increased by massage, but, afterwards, a progressive decrease of sensibility in the painful spot ensues. If some of the painful spots are not touched during the rubbing, they afterwards become more painful than they were before. It is to be noted that nervous impressions bear a relation to the tension of the general circuit, and this tension is under the influence of congenital and acquired factors. The exciting or sedative reactions produced by massage of the nerves are either cerebral or peripheral (sensory, motor, secretory, vasomotor). If the nodal points are situated at a depth so great that they cannot be reached by the finger, massage of the painful nerves is inefficacious; if the disease is too far advanced the reactions following massage become particularly intense. This form of massage requires much patience and practice, and should not be attempted except by physicians who make a specialty of it. Without neglecting general treatment massage of the nerves has been found useful in painful conditions of the nerves, arising from tuberculosis, diabetes, cancer, neurasthenia, hysteria; it is also said to be useful in sea-sickness.

**Massage by the Blind.**—It is said that the Japanese, who believe strongly in the beneficial effects of massage for the relief of painful affections, have for many generations employed the blind as masseurs. With proper instruction the blind become skilled in the art, their delicacy of touch rendering their ministrations pleasing to the afflicted. Their blindness may also be a recommendation to sensitive or susceptible patients. In St. Petersburg a regular course of two years' instruction in anatomy and physiology is given to blind pupils to fit them for this occupation, and it is said that much of the massage done in the Russian capital is in the hands of those thus trained. In Philadelphia there is a school for the training of the blind in massage. A training in massage might with advantage be given to some of the pupils of the Ontario Institute for the Blind at Belleville, Ont. Properly trained the pupils of this institute could render excellent service to the public, their art being exercised in the interests of medical science and in co-operation with the work of the medical practitioner.

J. J. C.



PERSONALS.

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ERRATUM.—Page 41, footnote, January number. For “Surgeon-General Hyman,” M.H.S., Washington, D.C., read “Surgeon-General Wyman.”

DR. ROGERS, of Fergus, has sold his residence and practice to Dr. A. Groves, and will move to Asheville, North Carolina, where he accepts the position of medical superintendent of the Industrial School for Boys.

DR. LOUIS MERCK, member of the firm of E. Merck, Darmstadt, Germany, has had conferred upon him by the Grand Duke of Hesse, the honor of a life membership in the First Chamber of Deputies. This is quite a high distinction.

DR. GEORGE BADGEROW, who for years practiced at the corner of Adelaide and John Streets, in this city, and who has been taking a special course in England for three years past, returned to Toronto about a month ago, and intends to settle again in this city.

A MOST DESIRABLE HOUSE FOR A PHYSICIAN.—Any physician desiring to procure one of the handsomest houses in Toronto can do so on the first of next month. It is situated on the south side of College Street, within a block of where the new General Hospital is to be erected. The house is new from top to bottom, having just been rebuilt. It contains fifteen rooms and two bathrooms, hot water heating, electric lighting and gas, brick mantels, concrete cellar, butler's and kitchen pantry, magnificent billiard room, square hall, in fact everything that goes to make up an absolutely modern dwelling. *The rooms on the ground floor are laid out specially for a physician.* Full particulars can be obtained at 145 College Street, any time before ten o'clock in the morning.

## *News of the Month.*

### GOVERNMENT OF NEW HOSPITAL.

EXCELLENT progress was made at the meeting of the committee having in hand the framing of a constitution for the proposed new Toronto General Hospital held in the reception-room of the Parliament Buildings on January 10th. The committee, which includes, of course, the trustees of the present hospital, well represents all the interests concerned—the donors, the university, the city, the Government, and the medical profession. The new constitution, in the shape of a draft bill, submitted by a sub-committee, of which Mr. M. J. Haney, one of the hospital trustees, is chairman, was adopted, with an amendment, increasing the Board of Trustees from a proposed strength of twenty-one to twenty-five, of which number five, instead of the three proposed, will be appointed by the Toronto City Council. The recommendation of the sub-committee, that the site of the new hospital should be on College Street, with a frontage from the Hospital for Sick Children to University Avenue, and extending south to Hayer and Christopher Streets, was approved.

The meeting did not, however, favor the committee's recommendation that Messrs. Sproat & Rolph be chosen as architects of the new hospital, with Mr. S. G. Currie as associate architect. This was opposed by Aldermen McGhie and Noble, who favored the offering of substantial prizes to be awarded to architects submitting in open competition plans selected by experts appointed by the committee as being the best. Messrs. J. M. Lyle, W. Ford Howland, and J. P. Hynes, local architects, on behalf of the profession also urged this plan. Finally the matter was referred back to the sub-committee, which will report at another meeting to be held in the near future.

The longest debate was on the question of the strength of and representation on the Board of Trustees. The draft bill provided for six trustees to be appointed by the Government, five by the university, three by the city of Toronto, and seven by the subscribers. Aldermen Harrison, Noble, and McGhie, supported by Mayor Coatsworth, strongly contended for increased representation for the city, the three former holding that the representation of the university might be cut

down to enable that to be done. Mr. J. W. Flavelle, in reply to various criticisms and questions, said it was desirable that the Government should continue to hold the control of the hospital, which originated and had remained as a Crown trust, although the Government had never interfered in its affairs, except to aid it, and he did not think it would interfere in the future, save in an acceptable manner. The vindication of the Government in granting aid to the project was in the hospital's connection, through the university, with the educational work of the province. The Government's control would be obtained by its own representation and that of the university.

Mr. E. B. Osler, M.P., did not think it was a wise thing that the Government should control. While he had every confidence in the present Government, the feeling of the people was that the less the Government had to do with these things the better. The tendency of men who had wealth was not to give it to institutions under political management. Mr. Byron E. Walker held that a new era had dawned for the hospital and the university. When men in Toronto had concluded the constructive periods of their fortunes they would be found to be giving to those institutions as freely as wealthy Montreal men were now giving to McGill University. Mr. Fred. Nicholls, Mr. Cameron, Dr. McPhedran, Dean Reeve of the Medical Faculty, and Dr. John Hoskin supported Government control on the basis of the bill. The educational features of the new hospital and its benefits thereby to the whole province were emphasized by all.

Hon. Mr. Hanna expressed as his personal view the opinion that it would be unfortunate if the present balance was not maintained. Outside of the city it was the educational feature of the project that appealed most strongly for support, and that made it easier for the Government to do what it was doing, and what it was right for it to do.

Finally it was agreed to amend the measure to provide that the Trustee Board should be composed of seven appointed by the subscribers, five by the city, five by the university, and eight by the Government.

The other clauses of the bill, which have been foreshadowed previously, were passed with but little discussion. They provide, among other less important things, that the Trustee Board is to be invested with the powers held by the present board in respect to holding lands, building, etc., and receiving the same or other gifts to the hospital or for its benefit from individuals or corporations; that no real estate or interest vested in the trustees and used for hospital purposes shall be expropriated by municipalities, corporations or persons without the consent of the trustees.

They are also empowered by the proposed Act to sell, mortgage

or lease land and premises invested in them, including the present General Hospital and land. Powers of expropriation are conferred on the trustees, as are also borrowing powers by the issue of debentures, such issues to be first approved by the Government. A section or wing of the new hospital is to be devoted to the purpose and maintained as a lying-in hospital to be known as "The Burnside Lying-in Hospital."

Everyone who up to the passing of the Act subscribes \$500 and after the passing everyone who subscribes \$1,000 to the hospital shall be called a "benefactor" and have his or her name inscribed on tablets at the principal entrance hall. Benefactors shall also be visitors of the hospital.

Only medical students of the University of Toronto shall be allowed in attendance upon the wards, these visits to be under regulations framed by the trustees.

The last clause reads: "The hospital shall be the Provincial hospital."

Until the new trustees are elected the present board, consisting of Messrs. J. W. Flavell, M. J. Haney, P. C. Larkin, Cawthra Mulock, and the Mayor, will act.

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### PROPOSED NEW HOSPITAL ACT.

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THE committee of the Toronto General Hospital have drawn up a document which they trust the Ontario Legislature will make the constitution of the Toronto General Hospital. The Act is not intended to create a new corporation, so that actions brought by or against the former trustees will still hold good.

There will be twenty-one persons "the Trustees of the Toronto General Hospital." Six of these will be appointed by the Lieutenant-Governor-in-Council, five by the University, and three by the city. The remaining seven will be chosen on the second Tuesday of every January by the subscribers and benefactors.\* A subscription of \$100 or more entitles to a vote for one year. A gift of \$500 before the Act passes, or \$1,000 after, entitles the donor to vote each year and to have his name inscribed on a tablet in the hospital's front hall. Such benefactors shall also be visitors of the hospital.

Each year the Municipal Council appoint their three trustees. They hold office for the year.

The University appoints two to serve till January 31, 1908.

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\* Since the Act was drawn up appointing the representatives on the Trustee Board of the new Hospital, it has been agreed that the Board shall be composed in all of twenty-five members of which seven are to be appointed by the subscribers, five by the City, five by the University and eight by the Government.

two more to serve till January 31, 1909, while their fifth appointee holds his office till January 31, 1910. When vacancies occur, they are filled each January by trustees for three-year terms.

The six provincial representatives on the Board are appointed so that two go out each year in similar wise till January 31, 1910. Each January thereafter the vacancies are filled by men to serve three years.

The subscribers, that is, the people whose names are to be in the front hall, plus those who gave \$100 that year, elect their representatives to serve in the same dove-tail fashion.

Trustees are always eligible for re-appointment or re-election.

Members of the hospital staff are not eligible as trustees, and should a trustee become a member of the staff, he necessarily ceases to be a trustee.

Should vacancies occur at any time they are filled by the body whose representation is short.

At all meetings of the Board of Trustees nine shall form a quorum.

Six months after this proposed Act passes, and whenever a vacancy occurs in their representation on the Board of Trustees, the subscribers and benefactors receive ten days' notice from two Toronto dailies and then meet. The subscriptions are then scanned under the supervision of the solicitor of the trustees, after which those whose generosity entitles them to vote, do so either in person or by proxy. Whatever two residents of Ontario received the most votes shall be the trustees elected.

The powers of the trustees are fully laid out in clauses 10-14 of the proposed Act. They shall have, hold, possess and enjoy all the rights, powers and privileges they now have, hold, possess and enjoy. That means that they continue to hold all land and premises they now hold, and that they can still take any kind of gift from any one, alive or dead, and whether it be in land, in money, or in kind.

They can take land for hospital purposes without license of mortmain, and no municipality or corporation can expropriate this land without their consent.

The trustees can sell or mortgage any land they now hold.

The present General Hospital site they may sell on such terms as the majority deem best, or they may lease it for any period of time up to twenty-one years, with right of further renewals forever. But those lands which are charged with certain debentures shall remain subject to such charge until the same are paid.

The trustees have the right to expropriate for their purposes all necessary lands and buildings, making compensation to the owners and occupiers. Sections 437 to 467 of the Consolidated

Municipal Act, 1903, define *mutatis mutandis* the power of the trustees in this connection.

The trustees are authorized to borrow and issue debentures for the raising of loans at such interest as they deem expedient. No debenture is to be issued for longer than forty years.

All issue of debentures must be approved by the Lieutenant-Governor-in-Council. Debentures may be secured by mortgages on hospital real estate.

The trustees can sue in any court and may distrain for rents that are in arrears, and for interest upon any mortgage they hold. No action brought by the trustees in respect of any right of the trustees shall be barred by any statute respecting limitation of actions.

The trustees may invest in good securities surplus hospital money, and, in a word, control the financial affairs, all the property, real and personal, of the corporation.

If the trustees decide to abandon the present site and build elsewhere, they must also build on the same site a new "Burnside Lying-in Hospital," in conformity with the existing terms. A wing or section of the new building would do.

All official documents must be sealed and signed by the chairman or other authority and countersigned by the secretary. The signatures of chairman and secretary or their representatives will appear on all cheques.

The trustees appoint and remove the secretary, the treasurer, the medical and other superintendents, and all other officers and servants of the hospital. They fix, too, the numbers and salaries of the staff.

Medical students of the University of Toronto may, upon payment of the fee, visit the wards of the hospital. Other medical students have no right there.

Patients, if they pay for all their maintenance, may employ their own doctor, subject to the regulations of the trustees.

Accommodation will be made for patients sent into the hospital on the order of the city upon payment of such rates as may be agreed upon from time to time.

The present staff continues as it is till altered by the trustees.

Whenever the Lieut.-Governor-in-Council requires, the trustees must put in their accounts to show the state of the fund and endowment of the hospital.

Besides drawing up this bill to present at the next session of the legislature, the committee recommended Messrs. Sproat and Rolph as architects, with Mr. S. G. Curry as associate.

The site recommended for the new building will be disclosed at the full meeting of the committee.

## TECHNIQUE TO BE OBSERVED IN THE OPERATING ROOM OF THE TORONTO GENERAL HOSPITAL.

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BEARING in mind the use to which the amphitheatre is devoted, great care should be exercised to keep the floor and seats of that part occupied by the students as free from dust as possible.

*Preparation of Arena for Operations.*—The floor should be scrubbed at least once daily with soap and water, and afterwards thoroughly wet with a solution of bichloride of mercury, 1-2000. The walls, seats, fixtures and all movable apparatus should be scrubbed once a day, and afterwards washed with bichloride solution, 1-2000. The operating table should be thoroughly wetted with carbolic solution, 1-20, immediately before each operation. If the table has been used for a septic case, it should have a thorough scrubbing and douching with soap and water followed by bichloride solution immediately after the operation.

*Dress of Surgeons.*—The operating surgeon and all assistants should be clothed in sterilized gowns with sleeves long enough to be overlapped by the gloves, and with caps provided with visors to cover the nose and mouth. Each surgeon may, and assistants shall wear rubber gloves, and care should be taken that these gloves are free from holes.

*Dress of Onlookers.*—All onlookers on the floor of the operating room in important operations should be clothed in gowns and caps with visors. No such onlookers are, however, to be admitted except by consent of the operating surgeon.

*Dress of Nurses.*—Similar to that of operating surgeons and assistants except that the cap should be of folded gauze, large enough to cover the hair. The gowns, caps and gloves of all surgeons and nurses should be put on by a nurse (sterilized) detailed for this work. This nurse should take pains to avoid touching any part of the clothing of those whom she is dressing, and, in case of such accident, she should frequently rinse her own hands in bichloride solution, 1-2000. She should not assist in this work after putting on her gloves preparatory to handling the sponges.

*Sterilization.*—All linen, gowns, caps, towels and dressings should be sterilized by steam at a pressure of 15 lbs. for at least half an hour.

In the case of prepared dressings, such as iodoform gauze, double cyanide gauze, or other manufactured gauzes, the receptacles containing such should be sponged off with bichloride solution, 1-2000, before being opened, and should be handled by sterilized hands and instruments, such as forceps for removing the gauze.

Tubes of sterilized catgut, silkworm gut, horse hair and silver wire should be kept completely covered in a carbolic solution, 1-20 (this solution should be changed once a week), and removed therefrom before the operation to sterilized water or an antiseptic solution. Silk or celluloid sutures or ligatures should be boiled for half an hour on first preparation, and afterwards be stored in ac. carbolic, 1-20, or in alcohol.

Rubber tubing for drainage purposes should be washed with green soap and water—where possible, inside as well as outside—then rinsed in sterilized water and afterwards scrubbed with ether, then boiled for half an hour and kept covered with carbolic acid, 1-20. This should be changed once a week.

The rubber tubing, nozzles, etc., for irrigating purposes should be kept in carbolic acid, 1-20, and after operations should be disconnected, washed and boiled.

Jars, funnels, basins and all receptacles should be thoroughly scrubbed with green soap solution or sapollo, then rinsed with sterilized water and boiled in the carbonate of soda solution.

The basins to be used in the operation should be carried in the basket covered by a towel to the operating room and placed in position by a nurse whose hands have been sterilized.

*Instruments.*—All scissors, scalpels and needles should be wiped with alcohol, then soaked for half an hour in carbolic solution, 1-20, and afterwards transferred to sterile water. All other instruments should be boiled in carbonate of soda solution for ten minutes immediately before the operation, and then transferred to sterilized water. To prevent discoloration of steel the instruments should not be immersed until the water is boiling.

*Instruments in Emergency.*—Should any instrument, not previously prepared, be called for during the progress of an operation, it should be entirely immersed in pure carbolic acid for two minutes, then seized in a pair of sterile forceps and vigorously rinsed for a moment in sterilized water before being handed to the surgeon.

*List of Instruments.*—A record of the number of forceps, scissors and needles used in each abdominal or thoracic operation should be kept, and the number accounted for before the wound is closed, the house surgeon in charge of the instruments being held responsible.

*Care of Instruments after Operation.*—(a) After clean cases, all instruments, including scalpels, scissors and needles, should be washed and scrubbed with a brush in warm (not hot) soap suds, then transferred to hot sterilized water for a few moments. This water should then be poured off and the instruments very carefully dried while still hot. (b) After septic cases, all instruments, including scalpels, scissors and needles, should be scrubbed



and washed as above, then boiled for five minutes, and afterwards dried as above.

*Gloves.*—(a) Before operation—Gloves should be wrapped in a towel and boiled for five minutes, totally submerged, and then placed in sterilized water or antiseptic solution. (b) After operation—Gloves should be thoroughly washed in green soap and water, then turned inside out and thoroughly washed again. While in the solution each glove should then be very carefully examined for holes and rents, and, if any be found, such gloves should be set aside for repairs. If they have been used for septic cases they must be boiled after being scrubbed. They should then be stored in bichloride solution, 1-2000 or dried and powdered.

*Repair of Gloves.*—The part around the hole should be wiped with gasoline or benzine, slightly roughened with fine sand-paper or emery-cloth, then smeared with rubber cement which should be allowed to become almost dry. The patch to be applied should be prepared in the same way, and when the two surfaces are nearly dry they should be pressed firmly together. The patches should be placed upon the inside of the glove. It should be recognized that the damaged glove is a menace, because not only may septic matter be pumped into the surgeon's fingers, but macerated epithelium and germs may be pumped out from the skin of the surgeon to the wound of the patient through a very small opening.

*Extra Gloves.*—There should be on hand, prepared, two or three pairs of extra gloves in case the operating surgeon or assistants should deem it advisable to change during the operation.

*Cleansing of Hands.*—The hands of all surgeons and nurses, and the forearms, including the elbows, should be thoroughly scrubbed with soap and water and a brush under running water for at least five minutes, then washed in alcohol (65 per cent.), and afterwards soaked in 1-40 carbolic, or 1-2000 bichloride solution for two minutes. After disinfection the hands should never be dried on a towel, nor allowed to dry in the air.

*Gauze Sponges, Wires and Pads.*—These should be of various sizes adapted to the needs of various operations. They should be made of gauze of good quality, so prepared that there are no loose edges upon the surface. They should be sterilized by steam under pressure, as above described, and should be rinsed out of sterilized water or antiseptic solution.

In quite clean cases they may be rinsed out of sterilized water and used over and over again during the operation, but in septic cases, or when contaminated with feces, urine, mucus, etc., they should be discarded after being used once.

In abdominal operations all gauze sponges should be pro-

vided with tapes, and should be carefully counted before operation and accounted for before operation is finished. A number of very large gauze sponges, say 1 foot wide by 2 feet 6 inches long, should be constantly on hand in case of abdominal operations in which large masses of viscera are necessarily exposed, as in operations for intestinal obstruction.

*Sea Sponges.*—Sea sponges after preparation should be kept in 1-20 carbolic acid. When required for use they should be removed from this solution to sterilized water or antiseptic solution. Sea sponges should be on hand in every operation about the mouth or throat, and in other operations when preferred by the operating surgeon.

*Stock Solutions.*—There should be kept on hand in very large bottles solutions of the following: Acid carbolic, 1-20; acid boracic, 1-20; hydrarg. bichloride, 1-500 and 1-1000; sterilized normal saline solution (double strength); rectified spirits; ether; turpentine; gasoline in pint bottles. In making up solutions from these stock mixtures great care should be taken that these solutions are of the designated strength, and vessels of known size should be used in compounding the solution, or the basins should be graduated by easily observed lines indicating quarts.

*Spare Basins.*—There should be available for the use of the surgeon during an operation (*a*) a basin of carbolic acid solution, 1-10, or bichloride solution, 1-2000, according to individual preference; (*b*) a basin of sterilized water, or normal saline solution. A similar arrangement of basins should be available for the nurses.

*Number of Surgeons and Assistants.*—In all major operations there should be, in addition to the operating surgeon, a first, second, and third assistant, and at operations of unusual magnitude, such as amputation at the hip joint, a fourth assistant will be required. For minor operations two assistants only may be required.

*Number of Nurses.*—The operating-room nurse should be sterilized, and have general supervision over all her assistants, and the general conduct of the operation and operating-room. She should not merely superintend, but be prepared to lend a hand where her judgment shows that she may be useful. For major operations she should have three assistants. The nurse who is to hand sponges may assist without gloves in preparing the operating-room and dressing the surgeons and nurses before the operation commences, but after she takes charge of the sponges and towels she should not be required to do anything else, and should take the utmost pains to prevent the accidental infection of her hands or the sponges, towels and dressings in her charge.

In case of any such accident she should rinse her gloved hand thoroughly in 1-2000 bichloride solution.

*Care of Patient after Operation.*—After the completion of the operation the responsibility for the proper care of the patient rests upon the senior house-surgeon, who should either accompany him to the ward himself, or instruct a competent junior to do so.

It is the duty also of the house-surgeon, on the return of patient to the ward, to acquaint the nurse in charge of the patient with the character of the operation which has just been performed, and with instructions as to the after treatment, and any emergencies which may arise owing to the peculiar nature of the operation.

*Preparation of Area of Operation while Patient is in the Ward.*—With regard to the area to be prepared, it is difficult to lay down any definite rules; but the general principle may be indicated by saying that, for example, when the operation is upon the trunk of the body, such as in kidney cases, an area extending at least 15 inches in all directions from the actual seat of operation should be prepared. Where possible, the preparation should be commenced the day before the operation and should be carried out as follows:

(1) The whole area should be shaved. (2) The part should be thoroughly wetted and rubbed gently for about one minute with turpentine. In case of mechanics with very much soiled and greasy hands, gasoline is an excellent solvent, and should be used before the turpentine is applied. (3) Thoroughly scrub the whole area with a soft nail brush, using soap and acid carbolic solution, 1-40. (4) Apply a wet dressing of bichloride solution, 1-2000 over night. (5) Next day, two hours before operation, repeat the wetting with turpentine. (6) Repeat scrubbing with soap and acid carbolic solution, 1-40. (7) Apply a layer of gauze, thoroughly wetted with bichloride, 1-2000, and bandage in position until the time of operation. (8) When the patient is on the table and everything ready for the operation, this gauze should be removed and the whole area thoroughly swabbed with 65 per cent. alcohol. In case of emergency operations this method of disinfection should be carried out as thoroughly as possible, using gasoline instead of turpentine, after the anesthetic is administered. The preparation should be conducted by either a competent nurse or the house surgeon.

*Special Technique in Septic Cases with Pus.*—Where it is known that pus will flow as the result of the operation, the surgeons and nurses should join their efforts to confine the pus and the septic products of the operation to the smallest possible area. The operating table should be entirely overlaid with rubber

sheeting covered with sterilized towels or sheets. Vessels should be provided and put into position to catch the pus as soon as it flows. Large loose tampons should also be used to mop up any escaping pus, and a receptacle for these should be provided immediately at hand, so that the pus is not passed across the operating table or to the nurses' table. These tampons and all infected sponges and gauze should of course afterwards be destroyed.

Recognizing the almost insuperable difficulties of disinfection after contact with virulent septic products, the utmost care should be observed by house surgeons and nurses not to become infected with such toxic matter. Forceps may often be used to handle infected sponges.

After such operations, any utensils or instruments known to have come in contact with the pus should be carefully kept from contact with uninfected utensils and instruments during the process of cleaning up.

#### ITEMS OF INTEREST.

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**New Hospital Staff.**—The members of the "outgoing" staff of the Toronto General Hospital were tendered, on January 4th, a banquet at the King Edward Hotel by the remaining members of the staff. The members of the "outgoing" staff are Dr. Hendry, Dr. Caulfield, Dr. Embree, Dr. Hair, Dr. Greenway, Dr. Sutton and Dr. Fawn. The "remaining" staff is composed of Dr. Caulfield, Dr. McNally, Dr. Adams, Dr. Burson, Dr. Burr, Dr. Davies, Dr. Biddy. Dr. Hendry, senior house surgeon of the outgoing staff, presided. For the usual six months' term the following have been appointed to the staff of the Toronto General Hospital: In Surgery—Dr. T. D. Archer, Campbellford; Dr. J. H. Soady, Toronto, and Dr. J. H. Kidd, Peterboro'. In Medicine—Dr. K. H. VanNorman, Toronto; Dr. F. W. Rolph, Markham, and Dr. F. J. Buller, Toronto.

**A Most Generous Donation to the New General Hospital.**—The Medical Faculty of the University of Toronto announced three weeks ago their donation of the splendid sum of no less than \$50,000 towards the new hospital scheme in this city. With their usual modesty no names were mentioned or publicity given as to who the active participants in the magnificent contribution were; but we learn that it was all subscribed in about half an hour at a meeting called for the purpose. We congratulate the Faculty upon their action, and feel that their generosity will be doubly appreciated owing to its being so spontaneous, proving at the same time their keen sympathy with the object in view.

This amount is entirely separate from the subscription given by the University itself. At the date of writing, but \$400,000 more is required before the entire amount necessary to build the new hospital is subscribed in full.

**The Ontario Medical Association.**—The attention of the profession throughout the province is called to the annual meeting of the Ontario Medical Association for 1906, under the presidency of Dr. George A. Bingham, of Toronto, and with Drs. D. J. Gibb Wishart and H. J. Hamilton, as chairmen, respectively, of the Committees on Papers and Business and of Arrangements. By vote of the members at the last meeting, that of this year will take the form of a business session to precede the meeting of the British Medical Association, which will begin August 21st. Consequently our provincial meeting will be convened Monday evening, August the 20th at eight o'clock. We will thus avoid conflicting with the necessary sessions of the Canadian Medical Association, and the members will arrive none too early to participate in the Imperial meeting of the next day. Members are particularly requested to remember this announcement. Notification of the various committees will be made at the accustomed date.—CHAS. P. LUSK, *General Secretary*.

**An Hygienic Institute for London, Ontario.**—If an hygienic institute is to be established by the Ontario Government, London wants it, and a deputation of most prominent residents of the Forest City were introduced to Premier Whitney and the Cabinet on January 18th by Hon. Adam Beck. The deputation arrived the night previous, and most of its members registered at the Queen's. It included Mayor J. C. Judd, ex-Mayor Dr. J. D. Wilson, ex-Mayor Campbell, Dr. W. F. Roome, ex-M.P.; Ald. John Forestal, Ald. William Geary, Ald. R. F. Matthews, Arthur White, president London Board of Trade; Samuel Sreaton, chairman of the hospital trust; J. Mattinson, hospital trust; Dr. W. J. Stevenson, Dr. F. P. Drake, Dr. Moorehouse, Dr. English, Dr. Waugh, Dr. McCallum, Dr. MacArthur, Dr. Graham and several others. Hon. Mr. Whitney met the deputation at 11 o'clock. It was urged that London has not in the past been treated over-generously with public institutions. The hygienic institute is counted on to cost some \$75,000, and be for subjects of higher education, bacteriology, pathology, modern researches. Its students would be from all over the Province, it was claimed. So far there is no such institution as the one proposed in Canada, but there are several in Germany and Austria. The late Government rather turned the proposal down, but the present administration has already expressed favor of the idea, and the gentlemen from London went away sanguine that their city will get the new institution if the Government gives it to any place.

# *The Physician's Library.*

## BOOK REVIEWS.

*A Text-Book of Physiological Chemistry.* For Students of Medicine. By JOHN H. LONG, M.S., Sc.D., Professor of Chemistry in Northwestern University Medical School, Chicago. Illustrated. Philadelphia: P. Blakiston's Son & Co., 1012 Walnut Street. 1905. \$2.50 net.

This is a neat, handy book. It presents the important principles of physiological chemistry in a form suitable for medical students. The usual topics are considered in detail, and the various facts and theories are briefly stated and explained.

In addition to the usual subjects contained in such works, the author gives an outline of the chemical phases of the recent theories of immunity, and a short explanation of the important applications of the methods of cryoscopy and electrical conductivity and other physical processes, in the field of chemistry related to medicine.

A. E.

*Practical Sanitary Science.* A Hand-book for the Public Health Laboratory. By DAVID SOMERVILLE, B.A., M.D., D.P.H. (Camb.), M.R.C.P. (Lond.), Lecturer in Public Health, King's College, London; Late Demonstrator of Physiology in the Medical School of St. Thomas' Hospital. London: Baillière, Tindall and Cox, 8 Henrietta Street, Covent Garden. 1906. (All rights reserved.)

"Practical Sanitary Science" deals with the subjects—chemical, physical, etc.—discussed at practical examinations in Sanitary Science, and contains a brief summary of the course of practical lecture demonstrations given to the D. P. H. class at King's College, London. The matters discussed are: Water, sewage, soils, air, milk, butter, meat, cheese, disinfectants, cereals, alcohol, preserved foods.

The standard solutions referred to in the book with some notes on the reactions of the more commonly occurring metals and acids are set out in the appendix. The author's views on disinfectants (chapter xxii., p. 186) are interesting. He writes: "A particular dilution of the disinfectant is made in distilled water, and to 5 c.c. of this five drops of a twenty-four hours' culture of the

organism in broth at 37 deg. C. are added. The mixture is shaken and subcultures made into broth every two and a half minutes up to fifteen minutes. These are incubated for forty-eight hours at 37 deg. C. Four different solutions of the disinfectant and one standard control may be tested on the same culture, under strictly comparable conditions, allowing thirty seconds for the manipulations necessary for each act of medication, and the same time for the making of each subculture. The efficiency of the disinfectant is expressed in terms of phenol performing the same work. In other words, that dilution of the disinfectant which performs the same work as the phenol solution is divided by the latter and a ratio is obtained, which the authors call the carbolic acid co-efficient. The subjoined table represents the manner of expressing results:

| Sample |         | Time culture exposed to action of disinfectants—Minutes. |   |    |    |     |    | Subcultures.         |             |
|--------|---------|--|---|----|----|-----|----|----------------------|-------------|
|        |         | 2½   | 5 | 7½ | 10 | 12½ | 15 | Period of Incubation | Temperature |
| Cyllin | 1: 700  | .  | . | .  | .  | .   | .  | 48 hours             | 37° C.      |
| "      | 1: 900  | .  | . | .  | .  | .   | .  | "                    | "           |
| "      | 1: 1100 | .  | . | .  | .  | .   | .  | "                    | "           |
| "      | 1: 1300 | .  | . | .  | .  | .   | .  | "                    | "           |
| Phenol | 1: 100  | .  | . | .  | .  | .   | .  | "                    | "           |

$$\frac{1100}{100} = 11.0$$

J. Carbolic Acid Co-efficient

It is a carefully written work and should be valuable to students and practitioners who wish to familiarize themselves with reliable methods of analyzing water, sewage, air and foods.

J. J. C.

*The Physicians' Visiting List.—Lindsay and Blakiston's for 1906.*

Fifty-fifth year of its publication. The dose-table herein has been revised in accordance with the new U. S. Pharmacopœia (1905). Philadelphia: P. Blakiston's Son & Co. (successors to Lindsay & Blakiston), 1012 Walnut Street. Sold by all booksellers.

This list has been before the profession every year for such a number of years, and is looked upon with such general favor, that it is difficult to find anything that one can say about it that has not already been said. It is perhaps as perfect as any pocket visiting list can be made. It contains besides a calendar for 1906 and 1907, a table of signs which, perhaps, now are more generally used than any other such; a table of incompatibles condensed from Potter's "Hand-book of Materia Medica, Pharmacy and Therapeutics"; a page on the immediate treatment of poisoning, arranged in a very convenient form; a description of the metric or French decimal system of weights and measures, and a table for converting apothecary's weights and measures into grams; a

dose-table arranged both in the metric system and in the apothecary system; hints on the immediate treatment of asphyxia and apnea; a table on the comparison of thermometers from Gould's new medical dictionary, and the usual table for calculating the period of utero gestation. In the pages arranged for the visiting list proper the value of the week's work is arranged in a special column on every page; then comes a column for the ledger page, and afterwards a good wide space for special memoranda. This is an excessively convenient arrangement.

The end of the book is taken up with pages for memoranda, addresses of patients and nurses, and four pages for bills and accounts asked for. This, in our experience, would seem rather superfluous. However, there may be patients who ask for their account, but any practitioner having sufficient of these to fill up four pages must be unusually fortunate.

Vaccination engagements, obstetric engagements, with the record of births, and ending with a very nicely arranged little cash account, completes one of the neatest physicians' visiting lists that we have seen this year. No practitioner should be without this book.

A. J. J.

*Man and His Poisons.* A Practical Exposition of the Causes, Symptoms and Treatment of Self-poisoning. By ALBERT ABRAMS, A.M., M.D. (Heidelberg), F.R.M.S.; Consulting Physician Denver National Hospital for Consumptives, the Mount Zion and the French Hospitals, San Francisco; President of the Emmanuel Sisterhood Polyclinic; formerly Professor of Pathology and Director of the Medical Clinic Cooper Medical College, San Francisco. Illustrated. New York: E. B. Treat & Company, 241-243 West 23rd Street. 1906.

Practicians of all kinds and schools, professional and non-professional, agree that the regular evacuation of the colon is a good method of preserving health. It also helps to cure many nervous and mental diseases, which are caused by intestinal self-poisoning. Better a clean colon than many temper powders.

Dr. Abrams presents in clear language the principles of auto-intoxication. His book should be read by well fed or over-fed people. After coming Fletcher's attenuated menu, which costs 10 cents a day, one is reminded of the words of the gourmandizing preacher, who was unable to deliver an advertised sermon, because he had eaten too much mince pie. When groaning with the pangs of indigestion a friend asked him if he was afraid to die, and he had the wit to reply, "Not afraid, but ashamed to die."

Dr. Abrams claims to have obtained good results from massage and the sinusoidal current of electricity in cases of intestinal



self-poisoning. He shows the good results of massage, faradization, hydrotherapeutic procedures and respiratory exercises in pendulous abdomen. It is a book suggestive of useful thoughts.

J. J. C.

*Biographic Clinics.* Vol. III. Essays Concerning the Influence of Visual Function, Pathologic and Physiologic, upon the Health of Patients. By GEORGE M. GOULD, M.D., Editor of "American Medicine," author of "An Illustrated Dictionary of Medicine, Biology, etc.," "Borderland Studies," "The Meaning and Method of Life," etc. Philadelphia: P. Blakiston's Son & Co., 1012 Walnut Street. 1905.

Certainly the author lays sufficient stress on the profound influence of small errors of refraction upon the general health, and as a source of a large part of the ills which occupy physicians and delay social progress. Whether we can agree to the same extent or not, there can be no doubt but that there is much neglect in this direction, and this book cannot be too strongly recommended for medical perusal as one of engrossing interest to the progressive man.

The new ophthalmology and its relations to general medicine, biology and sociology, as demonstrated by Dr. Gould, will certainly prove an "eye-opener" for the average physician, and serve to awaken thought and investigation on a much neglected and very important subject.

*Therapeutics; Its Principles and Practice.* By HORATIO C. WOOD, M.D., LL.D., Professor of Materia Medica and Therapeutics in the University of Pennsylvania; Member of the National Academy of Science. Twelfth edition, thoroughly revised and adapted to the eighth (1905) edition of the United States Pharmacopeia by Horatio C. Wood and Horatio C. Wood, Jr., M.D., Demonstrator of Pharmacodynamics in the University of Pennsylvania. Philadelphia and London: J. B. Lippincott Company. 1905.

This twelfth edition of Woods' "Therapeutics," though delayed in consequence of the revision of the United States Pharmacopeia, brings to its readers the latest data on the subject. The frequent changes during the past few years in the therapeutic fashions have been regarded somewhat in the light of a reproach to the profession, but the modern pharmacist has industriously inculcated the doctrine that old medical clothes will not keep out the cold no matter how well they appear in the eyes of those who use them. The author of this work, by reason of his scientific attainments and his unquestioned mastery of his subject, has skilfully avoided the criticism of unduly accentuating the import-

ance of the new remedies on the one hand, and on the other of passing lightly over the therapeutic value of the old ones.

In Part I. the author reviews briefly but clearly such subjects as massage, the feeding of the sick and various foods, the treatment of neurasthenic conditions, the uses of heat and cold, and the appropriate application of electricity as a remedial measure.

In Part II. his sub-classification of nervines, cardiants, and nutrients into families or physiological groups enables the reader at once to estimate the comparative value and special application of each remedy composing the group.

A most interesting and useful index of diseases has been introduced, by means of which the remedies in common use in any given disease may be passed before the eye of the reader in a moment.

The paper, text and binding of the book are all of first quality, and combine to present the most absorbing facts in the most pleasing form.

N. H. B.

*Operative Surgery.* For Students and Practitioners. By JOHN J. McGRATH, M.D., Professor of Surgical Anatomy and Operative Surgery at the New York Post-Graduate Medical School; Surgeon to the Harlem, Post-Graduate, and Columbus Hospitals, New York. Second edition, thoroughly revised. With 265 illustrations, including many full-page plates in colors and half-tone. 628 royal octavo pages, extra cloth, \$4.50 net; half-morocco, \$5.50 net. Sold only by subscription. Philadelphia, Pa.: F. A. Davis Company, 1914-16 Cherry Street.

In this work we observe that the publishers are not merely up-to-date, but they are fully alive to the advantage of having a 1906 book reviewed in a journal published promptly on the first of the month. Some jealous-minded people might complain that these Americans are away "ahead of the times," but who is there that will not admire such push?

The first edition of this book appeared three or four years ago, under the title of "Surgical Anatomy and Operative Surgery," but now it comes to us in its new clothes.

If we were writing a book on operative surgery we'd either not refer to anesthesia, or we'd give a fuller and more accurate account than is given here. There is no reference to the more recent methods of inducing either general or local anesthesia.

Since the first edition the illustrations have grown from 227 to 265. The material on gastro-enterostomy, etc., has been re-written and extended, and the recent advances in the surgery of the prostate have received due consideration in the revision of the section upon the genito-urinary organs.

F. N. G. S.

*Minor and Operative Surgery, Including Bandaging.* By HENRY R. WHARTON, M.D., Professor of Clinical Surgery in the Woman's Medical College of Pennsylvania, Surgeon to the Presbyterian Hospital and the Children's Hospital, Consulting Surgeon to St. Christopher's Hospital, the Bryn Mawr Hospital, and Girard College, Fellow of the American Surgical Association. Sixth edition, enlarged and thoroughly revised. With 532 illustrations. Philadelphia and New York: Lea Brothers & Co. 1905.

The advantageous features of this manual are: A concise description of the various bandages, surgical dressings, the preparation and use of aseptic and antiseptic dressings, X-rays, anesthetics, trusses for hernia, catheters and bougies, sutures and ligatures, etc. These portions of the surgeon's armamentarium, which are in constant use in practice, are photographically illustrated. The author also gives, in brief treatises, details on fractures, dislocations, ligation of arteries, amputations, excisions, resections, and special operations, viz., intubation of the larynx, lithotomy, the operation for appendicitis, the operation for strangulated hernia, etc. It is a clearly written, compendious work, and will be useful to student and practitioner, enabling one and the other to obtain in a few moments useful information not so readily discovered in the pages of more elaborate books.

J. J. C.

*A Manual of Organic Materia Medica and Pharmacognosy.* An Introduction to the Study of the Vegetable Kingdom and the Vegetable and Animal Drugs. Comprising the botanical and physical characteristics, source, pharmacopeial preparations, insects injurious to drugs, and pharmaceal botany. By LUCIUS E. SAYRE, B.S., PH.M., Dean of the School of Pharmacy, Professor of Materia Medica and Pharmacy in the University of Kansas; Member of the Committee of Revision of the United States Pharmacopeia. Third edition, revised, with Histology and Microtechnique, by William C. Stevens, Professor of Botany in the University of Kansas. With 377 illustrations. Philadelphia: P. Blakiston's Son & Co., 1012 Walnut Street. 1905.

Owing to the wonderful advancement in researches into the materia medica world it has been found necessary by the author to make many additions to this last issue. To the chapter on organic chemicals much has been added, and former articles much reduced in length, and present facts in materia medica and pharmacology placed in as concise a form as possible. The section written on the microscope and microtechnique will be found very useful to both practitioner and student.

A. J. H.

*The Microtometist's Vade-Mecum.* By ARTHUR BOLLES LEE.  
Sixth edition. Philadelphia: P. Blakiston's Son & Co. 1905.  
Price, \$4.00.

A new edition of Lee's "Vade-Mecum" is always welcomed by the practical microscopist. There is no laboratory hand-book which is of such practical value as a work of reference, and the editions have appeared at such intervals of time (the fifth edition appeared in 1900) that the practical worker feels the need of purchasing them as they are published.

In regard to such a well-known work little need be said. The number of pages is practically the same as in the last edition; the additional space has been obtained by condensation and rewriting of special chapters. If attention may be called specially to portions, where all are so excellent, one may mention the chapter on the central nervous system which seems thoroughly up-to-date. We notice that in the chapter on connective tissue staining no mention is made of Mallory's more recent methods. J. J. M'K.

*Military Hygiene.* By ROBERT CALDWELL, F.R.C.S., D.P.H.,  
Lieut.-Colonel Royal Army Medical Corps. London: Baillière,  
Tindall & Cox, publishers, 8 Henrietta Street, Covent Garden.

This is a valuable addition to any military man's library, as it deals with the subject in a clear manner. Not only can much benefit be derived from it by military surgeons, but any one interested in camp-life would receive many valuable aids regarding drains, position for camps, etc.

The subject of hygiene is of such great importance that every medical man cannot but appreciate the manner in which the author has dealt with the subject. D. K. S.

*Husband, Wife and Home.* By CHARLES FREDERIC GOSS.  
Toronto: William Briggs. Price, \$1.00 net.

Few ministers of the Gospel, if they have the knowledge, have the courage to deal with the sex question, preferring "to let sleeping dogs lie," but those who know that this is the most vital question to be dealt with in the uplifting of the race, will welcome the recent work of Charles Frederic Goss—"Husband, Wife and Home"—feeling that a better understanding of that principle which directly or indirectly accounts for every act of man, will bring about the results Mr. Goss points to—nobler husbands, better wives, and happier homes.

Apart from the good literary style, the subject is dealt with ethically and logically, and altogether in a manner to impress the reader with the author's wide knowledge of the principle that measures every man, the trinity of his own being. A. J. H.

# The Canadian Journal of Medicine and Surgery

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## *Original Contributions.*

### THE COMING OF THE BRITISH MEDICAL ASSOCIATION.

BY JOHN HUNTER, M.B., TORONTO.

If the visit of a prince, statesman or military hero be hailed with delight by social, political and military circles, no less heartily will the medical men of Canada welcome the coming of the British Medical Association. This Association has years enough behind it to merit the respect due to age, whilst the character and achievements of a host of its members fill up some of the most glorious chapters in medical literature.

Lord Bacon has said that "No man who is correctly informed as to the past will be disposed to take a morose or desponding view of the present." If this be true of ordinary affairs, it is equally so of medicine in its literature and practice. In view of the coming meeting, it is opportune to view medical history in general, that of the British Association in particular.

The material at hand is so vast that it scarcely seems possible to deal with either alone, much less both, in the limits of a paper. I shall try, however, to briefly summarize what I do write under four heads: I. Historical; II. Scientific; III. Patriotic; IV. Social.

#### HISTORICAL.

In the paragraph or two to be devoted to this section, it will only be possible to mention a few of the names in medicine that correspond to mountain peaks in geography. I need not detain you with any references from the medical literature of the Bible, for I presume, as Biblical students, you are all familiar with these. We are indebted to some early Egyptians

and Greeks for rescuing from oblivion whatever was known of medicine in these countries before the Christian era. The mythical personage, known to the Egyptians as Thot, to the Greeks as Hermes, and to the Romans as Mercury, is the reputed author of an encyclopedia, six volumes of which are devoted to medical literature. The first treats of anatomy, the second of diseases, the third of instruments, the fourth of remedies, the fifth of diseases of the eye, and the sixth of diseases of women. A common custom in Egypt was to place the patient by the wayside, that he might receive advice from anyone passing by who had any experience to relate. The patient, when cured, repaired to a temple, where a record of the case was taken and kept.

In India, the Brahminical *Organon* of medicine taught that the body had 100,000 parts; of these 17,000 were vessels, each of which was composed of seven tubes, giving passage to ten species of gases. Any perturbation amongst these gases caused disease.

Homer gives to Chiron, the centaur, the honor of having introduced our art amongst the Greeks. Chiron is said to have been the teacher of Æsculapius, whose culture and skill won for him the distinction of being honored as "The God of the Healing Art." A very ancient statue represents Æsculapius as seated on a throne holding a staff, around which a serpent is coiled—an emblem often seen in medical books. Though worshipped as divine, he had some attributes of humanity, for he is credited with being the father of two sons, who become distinguished physicians, and of three daughters, from the names of two of whom, Hygieia and Panacea, we have our words "hygiene" and "panacea." Æsculapius acquired a reputation that vies with that of some of the modern charlatans exploited by the daily press. A fable states that Pluto, god of hell, becoming alarmed at the paucity of daily arrivals, complained to Jupiter, who destroyed the audacious healer, on which account some wit has said, "The modern children of Æsculapius abstain from performing prodigies." Some of the descendants of Æsculapius formed themselves into cults. These constituted what has been facetiously called "The Angelic Conjunction," that of priest and physician, and dwelt in temples.

Between 600 and 400 B.C., three names stand out conspicuously, Pythagoras, Democritus, and Heraclitus. These travelled widely in Babylonia, India, Persia, Ethiopia, and Egypt, and, therefore, could have qualified as specialists in medicine, philosophy, mythology, mathematics and miracle working. They introduced the custom of physicians visiting their patients, for hitherto the sick had been sent to the temples. Democritus was the author of the atomic theory. This brings us up to the time when there appeared one of the most sublime figures that grace

the annals of history, viz., Hippocrates, "The Great Father of Scientific Medicine." He was born on the island of Cos, B.C. 460, and lived 104 years. "Hippocrates was worthy a place in the most brilliant period in the history of Greece. We might also add, the most brilliant of all the ages in literature, philosophy, poetry, and the fine arts." He was one of an illustrious group that included Pericles, Sophocles, Socrates, and Plato. His culture, his keen and patient power of observation, accuracy of description and exalted ideals have left their impress deeply stamped on medical literature for all time. Following the Hippocratic era we have the great school of medicine at Alexandria, where, under the patronage of the kings, anatomy was systematically taught from dissections of the human body, and physiology from experiments on the lower animals. This school attracted the brightest intellects of the period included between B.C. 400 and A.D. 150. The great library of Alexandria was said to have contained over 500,000 volumes. It was burned A.D. 640.

We come now to the most notable period in the medical literature of the Roman Empire. Space will only permit of a brief reference to two names, Celsus and Galen. Celsus, who was born in Rome about the beginning of the Christian era, was a celebrated author, and versed in rhetoric, philosophy, arts of war, economics and medicine. He was a servile follower of Hippocrates, and in classical language summed up the medical literature of his day. He gave a very concise and admirable description of a surgeon's qualifications, but despite his high ideals the "rank and file" of Romans held surgeons in abhorrence, and even in fractures and dislocations looked to spells and incantations for relief. Galen, A.D. 131-201, was a native of Pergamos. He studied at Smyrna, Corinth, and Alexandria, and settled in Rome A.D. 164. He was a voluminous writer, the author, it is said, of over one hundred books. He found the status of medicine in Rome very low, and labored faithfully to elevate it. Such was the high character of Galen's attainments and ideals that his writings dominated medical thought for more than fifteen centuries. His teaching was considered so infallible that even as late as 1539 a physician in London was prosecuted for impugning some of his statements. Galen is credited with the first vivisection. He left no worthy successor, and soon after his time began the disintegration of the Roman Empire. What is known in history as the "Dark Ages" followed, during which time little or no progress was made in either the science or art of medicine.

About A.D. 400 the preparation and dispensing of drugs was assigned to a distinct class, known as pharmacopeists.

On account of the spread of Christianity in the earlier centuries, efforts began to be made in establishing institutions for the

care of the sick. Dispensaries became quite numerous (A.D. 500-700), and through religious convictions, charity, or other motives, large sums were contributed and expensive structures erected for hospital purposes.

What is known in medical literature as the Arabic Period began about A.D. 600, and lasted until about A.D. 1300. Arabia, India, Syria, Egypt and Spain were overrun by the followers of Mahomet. Though one of these Moslem rulers burned the great Alexandrian library, others took a great interest in learning. Manuscripts were collected from all sources. One Christian interpreter got the weight of a book in gold for translating it. Arabian medicine followed very closely the dicta of Hippocrates and Galen. Rhazes and Avicenna were the most noted physicians. The former wrote a very accurate description of smallpox, a disease prevalent in the East long before it invaded the West.

Whilst luxury and licentiousness were rapidly undermining the virility of the Roman Empire, the sterner virtues of patriotism and love of adventure were moulding into national life three young nations, Britain, France and Germany. Great as have been the achievements of each and all of this trinity, there has been no more important factor in the development of their high civilization than the quiet, unostentatious work of their physicians and surgeons, whose history may now be briefly reviewed.

Throughout the first sixteen or seventeen centuries of the Christian era the practice of medicine was not, as a rule, pursued as a special calling. The healing art, such as it was, belonged to the office of the clergy, who discharged the dual function of priest and physician. During the latter part of this time, medical literature and practice were both deeply indebted to the religious orders for the introduction of books and the establishment of medical schools in connection with the universities. The great school of Salerno, near Naples, reached its zenith in the twelfth and thirteenth centuries. The most notable work issued from it is known as "The Commentary of the Four Masters." It taught, *e.g.*, the importance of certain symptoms in fractures of the skull—the use of pressure, caustics, ligatures; in protrusion of the bowel it was to be enveloped in the warm abdomen of a slaughtered animal until normal temperature and color were restored, and then, when washed with warm water, returned, and the wound closed with sutures. Other famous schools were at Bologna, Montpellier, Naples, Oxford, Cambridge, Edinburgh, Vienna and Paris. Amongst the most famous pupils and professors whose names are associated with these schools are: Lull, Gaddesden, Villeneuve, Guy de Chauliac, Lanfranc, Mundinus, Linaere, Dubois, Vesalins, Eustachius, Fallopius, Fernel, Porta, Paré, Harvey, Willis, Borelli, Sydenham, Valsalva, Fénélon, Boerhaave, Cullen, Bichat, Blumenbach, Haller, Morgagni, Hun-



ter, Jenner. To these many other names might be added of the "immortals" of the first eighteen centuries of our era.

About A.D. 1300 Pope Innocent III. issued an edict forbidding priests and monks to practice surgery. This edict ushered in a new era, in which medicine, surgery and pharmacy ultimately became special callings. Each of these became associated into distinct guilds, associations, or corporations. When this edict was issued, that portion of the clergy who practiced surgery handed over their art to the barbers, who became known as barber-surgeons, and whose occupation was depicted by a poet as those "Who shaved, drew teeth, and breathed a vein." The more enterprising of these barber-surgeons, such as Vesalius, or Paré, began to attend lectures and make dissections. These eventually separated from the barbers, and became known as surgeons. In 1800 the Royal College of Surgeons of London was established, and in 1843 this became known as the Royal College of Surgeons of England.

In May of 1423 a Faculty of Physicians and Surgeons was established in London. Its President bore the title of Rector of Medicine, and the physicians were under the government of the surgeons of physic, and the surgeons under the Master of Surgery. This union was a very unhappy one, and begat dissensions between the two bodies that took centuries to remove. One of the great evils of this time was the large number of unlicensed practitioners. This led to the passing, in 1571, of the first Act of Parliament relating to the medical profession. In 1518, Linaere, at his own expense, founded the College of Physicians, which received a charter of incorporation, and thus became entitled to issue a license to practice medicine.

In the concluding sentences of this brief and very imperfect review of medical history, time will permit only of reference to but few persons and events in the sixteenth, seventeenth, eighteenth and nineteenth centuries. Vesalius (1514-1564) published at the age of 29 his immortal work, "On the Structure of the Human Body," in seven books. The title was "Fabrica Humani Corporis." His genius enabled him to break away from the authority of Galen, and to describe what he learned from actual dissections. Harvey (1578-1667) revolutionized medical science by his demonstration of the circulation of the blood. Morgagni (1682-1771) published his great work "The Seat and Causes of Disease Investigated by Anatomy," in his 79th year. His character was in keeping with his high attainments. A celebrated writer describes him thus: "It is difficult to say whether one should admire most his rare dexterity and quickness in dissection, his unimpeachable love of truth and justice in his estimation of the work of others, his extensive scholarship and rich classical style, or his downright common sense and

status of this Association are the character of the papers, and the manly speech. From every point of view, Morgagni stands alone as an almost unattainable example to modern medical men."

Amongst his contemporaries were Haller, the celebrated physiologist of Berne; William and John Hunter, in their masterful work in anatomy, surgery and natural history; Cullen in Glasgow and Edinburgh, and Auenbrugger (1722-1809), whose little brochure of some 95 pages on percussion of the chest, although "unsaleable in his time, is to-day held worth far more than its weight in gold." Of his successors we have the brilliant young Frenchman, Bichat, who, although dying at 31, founded the science of histology; Baillie's "The Morbid Anatomy of Some of the Most Important Parts of the Human Body," ran through several editions. Other celebrated clinicians were Bright, Addison, Stokes, Graves and Bennett, and lastly, that great medical triumvirate, Virchow, Pasteur and Lister, the full fruition of whose works we cannot hope to see, unless at some future time we may be allowed an opportunity of looking down upon this mundane sphere through celestial telescopes.

Turning from the old world to the new, we find that *pari passu* with the increase of wealth and population in the United States and Canada there grew up medical schools and universities in all the larger cities. The names of these, as well as of the men who have helped to make them famous, are "part and parcel" of current medical literature, and therefore so well known to all of us that any further mention of them is unnecessary. The later decades of the nineteenth century and the dawn of the twentieth show great progress, in the means and methods employed, in advancing medical education, as well as many radical reforms in the laws governing medical practice.

*British Medical Association.*—Any review of medical literature would be very incomplete without a special reference to this historic organization. In 1832 there met in Worcester a small but very optimistic body of men, amongst whom was Sir Charles Hastings, the founder of this Association. From 1832 until 1849 it was known as the London and Provincial Medical Association, and since then under its present name. It exists for several purposes, such as the collection and advancement of medical knowledge; the study of the sanitary and climatic conditions of the country; the improvement of medical education; to maintain a high standard of medical ethics, etc. There was little of anything in its early history different from that of any other medical society. In 1845 the first of a large number of branches was grafted into the parent stem. And these have not only spread all over the British Isles, but have extended into all the colonies. They now number seventy or eighty. The features which have contributed most to the building up and maintaining of the high

ability of the men who read and discuss them. Research work receives special attention. The addresses of many of the Presidents and other officers have greatly enriched medical literature. Another feature that has added much to the popularity of the Association is its truly cosmopolitan spirit. Men from all the colonies, as well as from other nations, have brought their contributions, and have always been welcomed with true British cordiality. It has yet another virtue that we Canadians think adds greatly to its reputation, viz., its graciousness in accepting for a second time an invitation to visit our country, and in closing this paragraph I believe that I am voicing a very general feeling when I say in expressive, if not in classical terms, that it is "up to" every physician in this city, and throughout the whole Dominion, to do his utmost to make the coming meeting the very best in all the history of the British Medical Association.

#### SCIENTIFIC.

The course of scientific medicine down through the ages is somewhat analogous to that of some rivers part of whose course is above ground and part below. In some periods of its history it is quite discernible, whilst in other portions it is so submerged under systems, theories, traditions and religious dogmas as to be lost track of, until some great master arose and brushed away the *debris* that obscured and impeded its progress.

Before the Christian era, in Egypt, Greece, Rome, and in probably all the great nations of antiquity, physicians, either as individuals, or banded together in cults, had obtained from observation and experience knowledge of many facts pertaining to the causation, course and treatment of disease. These efforts were of a scientific character, in so far, at least, as they were supported by accurate observation and by experience. We can readily understand, however, why this kind of knowledge was so liable to become submerged at any time, when we remember how profoundly human thought was dominated in these ages by philosophical speculations, traditions, and religious edicts. Other factors, too, militated against the progress of scientific knowledge, such as the restrictions against dissections of the human body, the scarcity of books, want of instruments of precision, such as the microscope and stethoscope, and the absence of travelling facilities. The following are the chief systems of medicine evolved in the early ages:

*Dogmatism*—founded by Pythagoras. This system "regarded the universe as inhabited by acknowledged sentient principles which governed all substances in a determined way for preconceived purposes. Animals, plants and even minerals were supposed to possess vivifying spirits, and above them all was a supreme principle."

*Methodism*.—"explained all natural phenomena without recourse to the intervention of intelligent principles." Believers in this system applied the atomic theory, viz., "Atoms of various sizes were supposed to pass and repass, without cessation, through cavities or pores in the human body. So long as the atoms and pores maintained a normal relationship, health was maintained, but it was deranged so soon as the exactness of these relations was destroyed or interfered with."

*Empiricism*.—This system taught that "Signs constituted the natural history of disease; they thus believed that their remedies could only be suggested by experience, since nothing else could reveal it to them."

*The Eclectic System* chose from each what seemed most reasonable and satisfactory. Various methods of practice grew up under these systems, e.g., venesection, counter-irritation, use of purgatives, emetics, gymnastic exercises and resort to mineral baths, etc. To these were often affixed the obligations of religion—prayer, penance and fasting. A great impetus was given to research work by the famous school at Alexandria, where accurate anatomical knowledge was obtained from dissections of the human body, and physiological facts from experiments on the lower animals.

It would prove a very tedious and somewhat bootless task to endeavor to follow at all closely the silver thread of scientific medical knowledge through the dark chambers and mazy labyrinths in the catacombs of mediæval medicine, where lie the remains of departed myths, creeds, superstitions, traditions, speculations and disputations, that inspired or perturbed the minds of medical men in the earlier centuries of the Christian era. The writings of Celsus, Galen, and of one or two Arabian physicians, were the beacon lights of medical literature during the first fifteen centuries of our era. Smallpox was described by Rhazes in the ninth century; syphilis, of a very virulent type, became prevalent in Europe near the end of the fifteenth century, and mercury came into use as a remedy for it. *Materia medica* seems to have been as prolific a matron in ancient as in modern days. One mixture, which is said to have done duty for about two thousand years, contained, in addition to opium and vipers' flesh, some sixty other ingredients. Between A.D. 1400 and 1800 scientific medicine was enriched from many sources. Medical practice was emancipated from under the control of the clergy. Religious prejudices and penalties against post-mortem dissections passed away, thereby allowing the attainment of much more accurate knowledge of morbid conditions. About 1442 printing was invented. The art of printing became a factor of inestimable value in the production of books, and, through them, in the diffusion of knowledge.

The dissections of Mundinus in the thirteenth, and of Vesalius

and others in the sixteenth century, form epochs in the study of anatomy. Harvey's demonstration of the circulation of the blood, in 1628, revolutionized the sciences of medicine and biology. Paré shocked at the use of boiling oil and red-hot iron to arrest hemorrhage, adopted the use of the ligature in 1552. Malphigi described the capillaries, and Aselli the lacteals, in 1622. Sydenham, 1625-1689, and Boerhaave, 1668-1738, did much to make medicine more rational, and Morgagni gave his great demonstrations of pathological anatomy. Haller defined "sensibility and irritability," as properties of tissue. In the seventeenth and eighteenth centuries the study of physical science and the pursuit of experiments in physiological research gave a great impetus to scientific medicine. Lavoisier demonstrated the process of respiration, and Laennec the diagnosis of diseases of the chest, by physical signs. The discovery of the stethoscope, sphymograph, and microscope, gave a fresh impulse to the acquisition of new knowledge through the agency of more scientific methods. The discovery of the vasomotor system and its functions by Claude Bernard; the research work and rare anatomical collection of William and John Hunter; the introduction of ether as an anesthetic by Morton in the Massachusetts General Hospital, October 16th, 1846, and of chloroform by Simpson, November 15th, 1847; ovariectomy by McDowell; Beaumont's experiments through a gastric fistula; Virchow's cellular pathology; the new science of bacteriology and the inauguration of antiseptic surgery by Lister; the discovery of the X-rays by Roentgen, and the healing potency of certain rays by Finsen; local analgesia by cocaine; use of cold-water coil by W. T. Aikins; research work by McCallum; implantation of ureters in wall of rectum in exstrophy of bladder, by Peters, and the eliminative treatment of typhoid by purgatives, by Thistle—these are a few of the mile-posts that mark the highway along which scientific medicine has made slow but steady progress. "The history of scientific medicine is one of progress; one thought, one spirit, one mind is ever present through the ages. External events may disturb life and civilization, but nothing can check the development of human thought, or alter the operation of a law, whereby each succeeding age is the inheritor of an increasing sum of knowledge. We are heirs of all the ages. It is our privilege and vocation, not only to make such contributions to the sum of scientific knowledge as may be utilized for the benefit of the present generation, but to transmit an increased legacy to our successors."

#### PATRIOTIC.

No Canadian can read British history aright and not feel a just pride in being a citizen of such a nation. The word Britain stands for infinitely more than mere vastness of domain and great-

ness of martial strength. It stands for all that is best in the great forces that make for the highest type of civilization. Her flag insures civil and religious liberty, and her courts of justice inspire respect for law and order. Her literature embraces a very large share of the best in human thought, and her history reveals wondrous growth in industrial and commercial pursuits. The ability and acumen of her merchants and financiers have created a storehouse of wealth on which the people of other nations have been drawing for ages. But no other element in her national life has added greater lustre to her name than have the character and achievements of her medical men. There have arisen in each period of her history physicians and surgeons whose genius not only did much to insure health and mitigate suffering in their own time, but the beneficence of whose work will be felt for all time. Of her scientific organizations none has excelled in the amount and character of its work that of the British Medical Association. Surely, then, no Canadian physician can say that the coming visit makes no appeal to his patriotic sentiments. We, as Canadians, can and ought to take a great deal of interest in this Association. It is bound to us both by national and personal ties. Many of its members have visited our country, and some have come expressly to take part in the meetings of the Canadian Medical Association. These fraternal meetings have been hailed with the greatest pleasure. In extending a very cordial and generous welcome we are discharging two obligations: (1) We are recognizing and honoring the ardent labor and achievements of a large body of intelligent, courteous, self-sacrificing men. Those of us who have had anything to do with medical societies know right well from experience that success is never harvested from slumberous beds of indolence. The British Medical Association owes its present proud status to the unquenchable enthusiasm and untiring zeal of its members. (2) We owe it to our country and to ourselves to make a favorable impression on our visitors. It is altogether proper, and quite obligatory also, to tell of the great resources of our country, to make known its wealth of fertile land, its richness in mine and forest, its salubrious climate. But we must never forget that the most important factors in national life are the character and accomplishments of the people. Right here the personal responsibility comes in. A nation is a collection of units, and what these units are individually the nation will be collectively. The coming meeting will be such as we individually help to make it. The physician who will take no interest in it under the delusion that he will not be missed, will to the extent of his absence injure the meeting. It is not a few leading spirits that make these meetings a success. They are important factors, no doubt; but the hearty shake of a friendly hand and the interested attention of the hearer, are just as potent in creat-

ing a good meeting as are the papers and addresses. The attendance of every medical man in the Dominion, not rendered unavoidable by sickness or other just cause, at the coming meeting of the British Medical Association in Toronto should be looked upon as an assured fact.

#### SOCIAL.

Doctors should never try to divorce themselves from the duties of citizenship. The practice of their profession and the pursuit of knowledge should be used as opportunities for developing the social sense. It is, of course, to be devoutly hoped that the time may never come when the laity will fail to accord a very large measure of gratitude, by way of a good fee to and admiration for those scientific minds who sacrifice in the pursuit of knowledge so much of what is popularly known as social pleasure. The physician, in acquiring the technical knowledge necessary for his equipment and in the making use of it in his practice, is called upon to make a good many sacrifices, *e.g.*, the social gathering, with its mirth, music and pastimes; the marriage festivities, and the stately ball—all these have to be laid upon the altar of duty. But as practitioners we all know, whether we recognize the obligation to our fellows or not, the wreck and ruin that are the inevitable result of such an irrational type of professional life as we see everywhere about us. Some diversion is a necessity, so no apology is necessary for calling attention to the purely social features of the coming meeting, for they are very essential factors. It is at the social functions that the sphere of friendship will be widened, and at these gatherings our visitors will have an opportunity of becoming better acquainted with the Canadian people. The hospitality of many of the homes of the laity will be extended to our visitors, and we who live in the city should see to it that invitations are sent to our friends outside to come and spend a few days with us. If every physician in Toronto bring one or two with him, we will have at least one thousand to help swell the attendance.

We are highly favored in having in our ranks many who may be justly styled "past masters" in the art of entertaining. They can make a dinner, a sail, a lawn party, a reception, or any other social function very enjoyable, so we need have no hesitancy in promising our confreres abroad or at home a very happy time. In conclusion, whether our part be high or humble, let each of us catch some of the enthusiasm of the poet, who sings:

"Great duties are before us, and great songs;  
And whether crowned or crownless when we fall,  
It matters not so that our work is done."

**POTT'S FRACTURE—SPECIAL REFERENCE TO THE DISABILITY WHICH SO FREQUENTLY FOLLOWS.**

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BY B. E. MCKENZIE, B.A., M.D., TORONTO.

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THE various joints of the body and of the extremities should present a condition of perfect balance in order that their proper functions may be performed. When all the parts which control and constitute the ankle work in perfect harmony, there is a certain ideal relationship sustained between the foot and the leg which enables the functions of weight-bearing and motion to be performed with ease, comfort and grace. The relationships of the foot and its duties subject it to great stress and strain in the thousands of times every day that it is called upon to move from one station to another on surfaces of varying degrees of unevenness, with varying degrees of force and speed and carrying a body-weight of one or two hundred pounds.

Disability of the foot and leg, within the range of my experience, is more than ten times as common as disability of the hand and arm. In order to have a clear conception of a foot which is fitted for the perfect performance of its functions, we must have a good knowledge of its architecture. Beside the longitudinal and transverse arches ordinarily described, we must consider that in the transverse direction each foot presents a partial arch having a pier supported at the outer border of the foot, completed only when the two feet are considered together. The inner limit of each half arch is at a distance from the ground at the inner border of each foot. If the feet be placed together so that the inner borders be in contact, then a dome is formed having its apex at the point where the scaphoid bones come together. The unsupported end of the half arch, passing transversely in each foot, shows a tendency to descend, thus rolling the foot into a position of pronation, lowering the inner malleolus and the inner border of the foot.

The tendency manifested by the foot thus to roll into pronation will be still more clearly seen if it be observed that the body-weight transmitted through the tibia falls not evenly upon the os calcis, but more toward its inner border. If the foot be considered a triangular base sustaining the body-weight and having its angles at the tubercle of the os calcis, and at the heads of the first and fifth metatarsal bones, the vertical line of transmission of the body-weight reaches the ground not centrally but at a point nearer to the inner side of the triangle than to the outer, and when the foot is much everted this line may reach the ground at a



point entirely internal to the triangle. This tendency to roll over into pronation is counteracted in the normal foot by the power of the inner group of leg muscles, the tibiales and the long flexors of the toes, by the fact that the foot is wedged in tightly between the malleoli, and because at each step the impact is outward as well as forward. The fibula has its chief function, not in weight-bearing directly, but in acting as a brace or guard to support the tibia and to hold the foot in place so that it may not become pronated nor dislocated outward.

If this brace (the fibula) be broken so that the malleoli be allowed to separate and the body-weight to fall upon the foot,



FIG. 1.  
At A the overriding of the fragments is seen.

disability results from the strain put upon the structures at the inner border from the movement inward and downward of the inner malleolus and the relative outward displacement of the foot in its relation to the leg.

“By Pott’s fracture of the ankle is understood the injury caused by forcible eversion and abduction of the foot upon the leg. The lesions which may be present in this fracture are a rupture of the internal lateral ligament, a fracture of the tip of the internal malleolus, a separation of the lower tibiofibular articulation, an oblique fracture of the fibula two or three inches above the tip of the external malleolus, a fracture of the outer

edge of the lower end of the tibia. Ordinarily, the mechanism of the fracture is somewhat as follows: As the foot is abducted, the strain is felt at the internal ligament and this gives way. If the force continues, the internal malleolus is pushed through the skin, and an open fracture results. If the internal lateral ligament holds against this lateral force, the tip of the internal malleolus may be pulled off."—*Scudder*.

It will be manifest that the likelihood of disability arising from eversion of the foot after recovery from a Pott's fracture will be greater in one who was predisposed to such a deformity before the accident occurred. The number of persons who suffer in a greater or less degree from having feet thus unduly everted is very great. It is commonly spoken of when it occurs in children as "weak ankles," in adults as "flat-foot."

When this disability becomes the subject of investigation by a court of justice, great care should be taken to ascertain whether there was an antecedent tendency to pronation. It may safely be asserted that in a case previously showing such a tendency to pronation, considerable disability must result after fracture, even if the surgeon succeeds in getting the foot and the fragments of the bones into just the relationship which they previously sustained. This disability would follow in such a case as a consequence of the traumatism alone. Many persons who are disposed to have the everted foot have just sufficient margin of reserve to enable them to get along, but no more. When this small margin is wiped out, as traumatism alone may do, even if replacement is perfect, and if the healing processes are complete, yet painful weight-bearing and locomotion must follow.

In the skiagraph here shown it will be seen that the outer malleolus was pushed still further outward, widening the space between it and the inner malleolus, while the upper end of the lower fragment of the fibula moved inward and upward until it came into contact with the tibia, the fragments of the fibula thus overlapping at the point of fracture.

It will be seen that the great danger in the treatment of this fracture is that the foot may not be placed and retained far enough inward in its relation to the leg.

#### ADJUSTMENT OF FRACTURE AND DRESSING.

Scudder thus describes the adjustment: "The patient is anesthetized. The foot is strongly inverted by great lateral pressure put upon the posterior part of the foot. This inversion of the foot cannot be made too strongly, for the deformity cannot be over-corrected. The position of extreme inversion is not a painful one to maintain. Ordinarily the lateral pressure applied is too slight entirely to correct the deformity." Up to

this point I am in cordial agreement, but I must strongly assert my confident belief that there can be no fixation means employed so satisfactory as plaster-of-Paris applied and retained as the regular circular and continuous dressing. This I would apply whatever be the amount of swelling present. If sufficient absorbent cotton be applied over the foot and limb the plaster-of-Paris bandaging may be done so as to make comparatively firm pressure. The yielding of the cotton will, on the one hand, prevent undue and dangerous pressure, and its elasticity, on the other hand, will guarantee a moderate degree of pressure upon the foot and leg in all its parts. Under any circumstances where there is not a compound fracture, this dressing may remain on for several days. When the swelling has subsided, it may be removed and a more snugly fitting plaster dressing applied. If, in the meantime, fragments of bones have slipped out of position, a readjustment may be made. When plaster bandages are thus dexterously adapted to every unevenness and inequality in the foot and leg and applied so as to make a reasonable but safe degree of pressure, they make the most reliable fixation dressing which it is possible to employ.

While I have no statistics at hand to show the proportion of cases which result badly and cause disability from the mal-position of the lower fibular fragment just referred to, yet I am led to believe that it is a condition of frequent occurrence. For its relief either one of two methods of procedure may be adopted.

#### MECHANICAL TREATMENT.

(a) A boot may be so constructed by building the sole wider and thicker at the inner border as to roll the foot inward, bringing it more directly under the body-weight. This may be quite sufficient in cases of slight disability.

(b) This may be supplemented by a brace at the outer side of the leg passing from the boot, to the shank of which it is attached, to a point just below the knee where it is retained by a strap passing around the leg, while another strap passes around the ankle drawing it toward the brace at the outer side. These may be further supplemented by a strap securely attached to the sole of the boot inside and passing under the arch and upward by the inner border till it reaches across to the bar at the outer side where its upper end is secured.

CASE 1.—Mrs. L., aged 56, a large woman weighing about 170 pounds, first consulted me, August 15th, 1905. In July, 1904, she fell into a cellar, fracturing the fibula and causing outward displacement of the foot. Now she has marked eversion of the foot, and complains much of her inability to walk or stand for

any considerable length of time. I advised operation with a view to replacing the foot. Mrs. L. and her husband being averse to operation I proposed the use of a boot and brace such as described above.

In October last she came to Toronto and remained several days while the boot and brace referred to were made and carefully adjusted. She at once experienced marked relief in standing and walking. I saw her again on November 2nd, when she

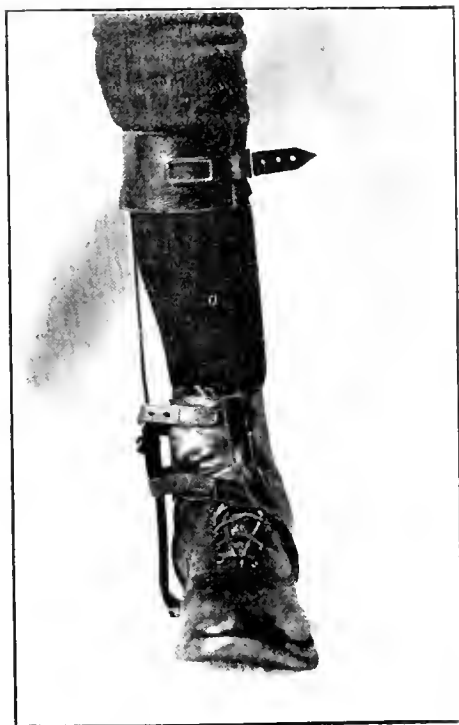


FIG. 2.

In this illustration the brace should be shown at the *outer* side and the strap should be reversed so as to pull the ankle *outward*. Sole of boot should be wider and thicker.

reported that the most marked benefit had resulted from the support given, that she was now doing her own household work, and that the function of the foot was constantly improving.

#### OPERATIVE MEANS.

Separation of the fragments of the fibula followed by replacement inward of the foot is likely to prove insufficient. The separation of the malleoli which resulted from the fracture of the fibula, the adhesions which have occurred during the healing

process, and the natural tendency of every foot to be everted, will prevent the replacement from being effective and satisfactory unless the foot be carried farther inward than can be done by operating upon the fibula alone. It will be found necessary, on the one hand, to cut the tibia at a point a short distance above its lower extremity and to carry the entire foot and the lower portions of the tibia and fibula inward to such an extent as to make quite a decided inward bend in the leg at the point of section. Seudder makes the very strong statement that in dealing with the ordinary Pott's fracture it is impossible to carry the foot too far inward when the parts are being adjusted and the fracture dressed. At one time I thought his statement too strong; but in dealing with cases of recent fracture, and realizing that the tibia is not broken except when the tip of the malleolus is torn off, I have reached the conclusion that the surgeon runs no risk by living up to Seudder's advice. It is true that in operating because of the disability which has resulted from a misplaced foot following the fracture, when not only the fragments of the fibula have been separated, but the tibia has been cut, it is possible for the surgeon to carry the foot too far inward. He is not likely, however, to err in this regard as it will be found necessary to make a considerable bend in the leg at that point in order that the foot may be moved sufficiently inward to bear firmly and evenly the super-imposed weight of the body.

After separating the fragments of the fibula and cutting the tibia, carrying the foot well into adduction and dressing the limb in plaster-of-Paris, it should be allowed to remain in this position for a period varying from eight to twelve weeks. After this the foot will be found to come so directly under the body-weight as to make locomotion much more satisfactory.

CASE 2.—Miss M. B., aged 25; seen in August last. About four years previously she had been thrown from a carriage in a runaway accident and had sustained a Pott's fracture of the leg. The accompanying skiagraph will show that in adjusting and dressing this fracture the foot was left in an everted position so that the fragments of the fibula were overriding to an extent of about half an inch, and the upper end of the lower fragment was impinging upon the tibia, permitting an outward movement of the external malleolus, and a consequent widening of the space between the malleoli. During the four years that have intervened, various plans of treatment have been adopted without success. She walks fairly well for a short distance, but standing for any length of time or walking for a considerable distance, which should be easily and comfortably done by one of her age, is accompanied by pain and a feeling that the limb is giving way under her.

I advised operative treatment but spoke of mechanical treatment also. Agreeable to this advice, she was admitted to the Toronto Orthopedic Hospital, and, assisted by Dr. S. M. Hay, the operation was performed as described above. It was not necessary to secure the bones in position by suture. There could be no displacement of the fragments of the tibia seeing that the fracture was transverse following cutting of the bone by McEwan's osteotome. Plaster-of-Paris was relied upon entirely to hold the parts in their new position and to secure sufficient adduction of the foot. Healing was without incident, except for the fact that some small spicules of bone, having been separated while freeing the fragments of the fibula, prevented the wound from healing as promptly as usual. In the course of a few weeks, however, all was healed, a boot and brace were made similar to those described above, and these she will be asked to use for probably a year, until we have assurance that the fragments are remaining in the position in which they were placed. To summarize:

1. What is known as "Pott's fracture" consists of a fracture of the fibula a short distance above its lower end, rupture of the internal lateral ligament or fracture of the inner malleolus and outward displacement of the foot.

2. After adjustment and healing, disability frequently follows because the foot remains pronated, or becomes pronated from bearing the body-weight.

3. During adjustment the foot and external malleolus should be drawn strongly inward bringing the foot into adduction—even to the extent of over-correction—and bringing the malleoli as close together as possible, thus guarding against the foot relapsing into pronation.

4. It should in all cases be ascertained whether there was any antecedent tendency toward undue pronation.

5. The disability may be remedied by mechanical means or by operation and readjustment. In operating it will be necessary to fracture the tibia as well as to separate the fragments of the fibula.

6. The continuous circular bandage of plaster-of-Paris forms the best fixation dressing.

## *Selected Articles.*

### THE PROPHYLAXIS OF APPENDICITIS.\*

BY H. HOLLOWAY, M.D., NEW YORK.

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INFLAMMATION of the appendix vermiformis is so frequent, and is attended with so considerable a percentage of disastrous issues, that leaving out of consideration the very few cases occurring in the course of typhoid fever, of tuberculous or malignant disease of the intestine, of actinomycosis, or as the consequence of trauma, the question Can we do nothing to prevent such inflammation? seems perfectly pertinent.

What is the etiology of appendicitis?

In my book on "Constipation in Adults and Children" (1), in the first chapter on "The Consequences of Constipation," under the heading "Appendicitis," I say: "I hold that this very grave affection is in the majority of instances provoked by constipation (temporary or habitual)." The reasons therefor and the facts upon which they are based are then given.

Wyeth (2), in an article on "Appendicitis," published in 1896, lays great stress upon what he holds to be the unfortunate position of the appendix; that it is for this reason subject to distention from semiliquid fecal matter which passes into it from the cecum, and of which it cannot readily unburden itself, owing to the weakness of its muscular tunic; that the weight of the bowels tends to interfere with its nutrition by direct pressure upon the single artery that supplies it; people of sedentary habits and with chronic constipation suffer more on account of increased pressure.

It will, I believe, be generally admitted that the first part of this statement is not in exact accord with the facts. It has been demonstrated time and again by post-mortem section that under ordinary circumstances the appendix is empty or contains only a little mucus. It can be readily understood wherefore this is so when it is recalled that in life, in the normal state, the appendix is doubly closed to the cecum, first by the falling together of its lips, and secondly, by a fold of mucous membrane which projects

\*Read at the meeting of the Medical Society of the Greater New York, November, 1902.

into its lumen on the inner side of its orifice, forming a sort of valve, as first described by Gerlach. This, though contrary to the positive statement of Treves (3), has been sufficiently demonstrated by others.

As to the weight of the bowels interfering with its nutrition, that is also a statement based on theoretical grounds only. If this were so, we should have many more cases without concretions than we do have; we should see many more cases of gangrenous appendicitis, and, more particularly, we should have a large number of cases in old people, in whom the general circulation is already of greatly lessened force, and who are, therefore, prone to ulcerative and gangrenous processes in those parts the nutrition of which is still further impaired by interference with its vessels, either by pressure upon them or by obstructive processes within or about them. The fact is, however, that appendicitis is most prevalent in the earlier periods of life, when the circulation is of greatest vigor, and naturally that of the appendix also of much better force than at subsequent periods of life. Thus, Fitz (4), in 251 cases, found 76 per cent. of the patients under thirty years of age. Hawkes (5), of 224 cases seen in St. Thomas's Hospital, found but nine-tenths of one per cent. in persons over fifty years of age. Furthermore, the bowels make no pressure on the other abdominal organs or between their various segments, as has been sufficiently demonstrated by studies upon intra-abdominal pressure. This is all so well and so abundantly proved by necropsies that no further evidence in its support need be adduced here.

Fowler (6) also looks upon the disease as caused primarily and principally by impairment of the nutrition of the appendix by interference with the circulation of its single artery, a terminal vessel only, as he describes it. He further fortifies his position by the report of Van Cott as to his finding in the mesoappendix of thirteen appendices excised for the disease and submitted to him for examination, various forms of obstruction, para-, peri-, or endoangiitis, or organized thrombus. The greater exemption of women is explained upon the ground of a better blood supply, namely, additional vessels that pass in the fold running from the broad ligament to the appendix, the appendicular-ovarian ligament.

The investigations of Breuer (7) made at the express instigation of Nothnagel have contradicted the assumptions of Fowler. Summarized, the results of these investigations are as follows:

1. The blood supply of the appendix is not of the scant character, furnished by a terminal vessel only, that some authors would have us believe. In fact, quite a number of vessels of fair size pass from the circulatory system of the cecum to the appendix,



are distributed among its various structures, in the mucous membrane, in the muscular tunic, and immediately beneath the serous covering, and anastomose with branches from the appendicular artery—representing, thus, a blood supply ample in all respects for the nutrition of so very small and functionless a segment.

2. The vessels supposed to furnish the appendix in women with an extra supply of blood could not be found by him either on microscopical examination, or even after careful injection of the parts.

3. The changes in the arterial vessels, which Van Cott asserts that he has seen with unfailing regularity, could not be discovered by him.

The conclusions of Nothnagel (8), based upon these results are, that it is true that the blood supply of the appendix is not so ample as that of other parts of the intestinal tract, and that, therefore, an obstruction of the artery at its entrance into the mesenterium would be certainly followed by the gravest consequences. But these accidents, though possible, are of so extraordinarily rare an occurrence that they are not to be considered in the pathogenesis of the so-frequently occurring appendicitis.

The seriousness of the objections that present themselves to any pathogenesis of the disease based upon the ground of anatomical construction, faulty position, or insufficient blood supply, was felt by Nothnagel (9) in his extensive consideration of the etiology of the disease, in which all the various theories are discussed and, frankly expressed, the reader thereof is left in rather a hazy state as to what is really the effective factor in its production.

However, and this is the point to which I desire to direct attention more particularly, whatever views may be held upon this point by the various authors, the influence of constipation of an overloaded colon is acknowledged by all and invoked more or less by all.

Mynter (10), in his treatise on "Appendicitis," counts indigestion and constipation among the predisposing causes.

Lange (11) is very outspoken on this point. He considers appendicitis unusually prevalent in this country, and particularly in New York. He attributes this to two of our national failings, that of eating too much and chewing too little, the result of which is constipation. Contributory causes of the prevalent constipation are our hurrying, restless, nerve-straining lives, which lead us to ignore the demands of Nature. Fecal accumulations set up trouble in the mucous membrane of the cecum. So-called fecal calculi are often found—but very rarely, much more rarely than was formerly believed, foreign bodies are a cause of the disease.

It is true that Fenwick (12) reports that, out of 43 cases of

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perforating appendicitis, in subjects whose previous state of health had been recorded, only three acknowledged a constipated state of the bowels. This, however, as stated in my book already referred to, "does not detract from the force of my argument. My experience has taught me that many more persons are constipated than really have an idea that they are so. With some, the evacuation every morning of a few hard, rocky scybala, requiring considerable effort for their expulsion, with others a scant evacuation every third or fourth day, is held to be an evidence of regularity, and they will tell their physician, when the occasion therefor arises, that they are regular." I have had but lately some examples very illustrative of this.

1. A gentleman called upon me for treatment for his stomach. On questioning him, he informed me that his bowels were regular. An examination disclosed a marked hyperacidity. I treated him, but he did not make good progress. Finally, I questioned him again and with more minuteness, and then found that he was very constipated, and that he had been so for some time before he came to me, how long previously he could not remember.

2. A few months ago a lady came to consult me. Questioned as to the state of her bowels, she said that they were regular. A week later I discovered that she was of a decidedly costive habit.

3. Some days ago a gentleman came for treatment for a stomach trouble. To the question as to the condition of his bowels he answered, "Oh, yes, they are all right." However, close questioning disclosed the fact that he was constipated, and that unless he took something to move the bowels, either medicine or large quantities of cold buttermilk, he had no action.

"Moreover, attacks of temporary constipation of longer or shorter duration are entirely overlooked or forgotten by the great majority of persons." (13)

Upon this basis, holding constipation to be the essential factor, the pathogenesis of appendicitis stands out clear and distinct and is readily understood by all.

How does constipation affect the appendix?

First, it enables fecal matter to pass into the appendix. It is in this way: "In constipation the residual matter accumulates in the cecum and distends it; the orifice leading into the appendix is thereby opened. Feces can now pass into this part, or rather, are driven into it by the constantly growing mass. Their complete return, however, into the cecum is prevented by this same mass of fecal matter in the cecum, which acts as an obstructing wall to anything coming from the appendix and by the lack of sufficient muscular power inherent in the organ." (14)

Second, the fecal matter thus forced into the appendix and stagnant therein, may undergo liquefaction and permit of the

development of bacteria, which may give rise to an inflammatory process, either of a mild character, a catarrhal inflammation, or of a severe and grave type tending to the rapid formation of pus and with all the aspects of an acute infection, owing to the absorption of toxins by the richly developed lymphoid system of the mucous coat. All this depends upon the character of the feces that are forced into it, whether or not they contain matters that undergo putrefaction easily or not.

It is only in this way that the theory based upon the assumption of the semblance of the lymphoid structures of the appendicular mucous membrane to the tonsils, and from which Sahli (15) deduced his angina of the appendix, has any ground.

It is only in this way that the bacterial etiology of appendicitis has any basis. In proof of this may be adduced the fact that diarrheas, even of putrid character with abundant development of bacteria of varied forms and characteristics, do not engender appendicitis. In the few cases recorded where it was said to have so followed it was a diarrhea with constipation as described by various authors, and by me in the book already referred to.

Third, it may lead to the formation of concretions. When feces become stagnant in the colon they have a tendency to become inspissated, hardened. No evidence is needed to prove this, for almost every medical practitioner of any experience is familiar with the hardened scybala that are so common in cases of constipation.

The appendix is part of the intestinal tract, is anatomically constructed like it, not a whit different, and there is no reason why that which is of so common an occurrence elsewhere should not happen here. On the contrary, the inspissation occurs here more readily, owing to the greater immobility of the contained matter, the greater length of the absorbing surface, as has been very clearly set forth by Finkelstein (16), and the closer application of this absorbing surface to the contained matter. The mucous membrane takes up from the feces the fluid portion thereof, and nothing but the dry, hard residual matter is left.

The findings of Lockwood (17) as to the abundance of bacteria in some of the concretions are also thus readily explained without recourse to the theory of a special bacterial invasion, for which no proof can be adduced, but rather much evidence to the contrary, as has been already indicated above.

There is no ground, as has already been pointed out by Nothnagel (18), for the supposition of Talamon (19) that the concretions are formed in the cecum and rolled into the appendix. The contents of the cecum are semifluid, or nearly so, and inspissation to such degree does not occur therein. No such

hardened masses—that is, of cecal origin—have ever been found there.

The observation of Goldbach cited in support (20) cannot contravene the position here taken, as the history of the case clearly points to a cholic origin of the two small concretions found in the cecum.

There remains only the question as to the greater exemption of women, since they furnish to the ranks of the constipated a contingent as large as, if not larger than, does the male sex.

To this answer may be made: First, that in woman the pelvic cavity is much roomier than in man, and thus, perhaps, permits of greater distention of the cecum without the orifice of the appendix being forced open. Second, that woman is more particular in her food, eats more at her home table, and is thus less liable to introduce decaying matter, which is likely to set up sharp putrefactive fermentation, into her digestive tract. Third, she is not given so much to the free consumption of alcoholic beverages, which of themselves cause a predisposition to congestive processes in the abdominal organs, and particularly in the terminal parts of the intestinal tract.

With the etiology of the disease thus clearly before us, the answer to the question propounded at the outset of this paper can be no other than an affirmative one. As the old maxim has it, *sublata causa tollitur effectus*, remove the constipation and there will be no danger of appendicitis.

By removing the constipation I do not mean the giving of a purgative to provoke an evacuation, to be followed only by a still more obstinately constipated state, but a restoration to the intestinal tract of its pristine, its inherent vigor, so that it can empty itself with regularity and spontaneously, of its own volition as it were, by the use of its muscle as Nature intended and provided that it should. That this can be done has been amply demonstrated by many eminent men, and the procedures therefor have been fully described in my book on constipation already referred to.

It would, of course, and I am fully aware of it, be a rather difficult matter to demonstrate clinically that to remove constipation will obviate the risk of appendicitis. However, if cases in which a first and even a second attack of appendicitis had occurred, and eminent surgeons had, after full examination, advised and urged operative interference, had been cured of their appendicitis by relieving their constipation in the manner just above referred to, then I believe it must be admitted that the correctness of the position here taken has been further fortified, in all respects, by clinical demonstration.

The following, as their histories show, are such cases:—

CASE 1.\*—June 9th, 1897, M. J., a male, aged twenty-seven years; stoutly built young man, five feet eight inches in height; weight, one hundred and sixty pounds; clerk. He always enjoyed good health until two years ago, when he had an attack which was said to have been typhilitis. The physician who attended him employed, among other things, rectal injections, which brought away enormous quantities of fecal matter. After the lapse of some time he was able to be up and about. On April 10th, 1897, he had another attack which, according to his statement, was in all respects like the first. He eats well and always has a good appetite. His bowels have been constipated since he was eight years old, when he began to work. He does not know how the condition became a habit. He has used purgatives regularly, and therefore is at a loss to account for the large accumulations evacuated as above mentioned.† He was formerly much given to athletic exercises, riding a bicycle, jumping, etc., but since the attacks of typhilitis he does not ride the bicycle, and he has to be otherwise careful in his movements, for any unusual motion, such as jumping off a car, will cause pain in the right inguinal region. Since the attacks above mentioned he has had spells of bad breath. Occasionally he has headaches, not pains, but rather a dullness, a heaviness of the head.

*Examination.*—Stomach normal. Abdomen on inspection shows nothing abnormal; palpation reveals a dense, broad induration in the right inguinal region, extending from the right anterior superior spine of the ilium forward toward the umbilicus, eight centimetres in width and downward and forward, following the curvature of the region to the linea alba, six centimetres in length. The part is not sensitive to light superficial palpation, but a more forcible stroke, with deeper pressure, will cause him to wince, showing tenderness. I was rather in doubt whether anything could be done, but concluded to make the trial.

*Treatment.*—Dietary regulations; hydragric applications over the seat of the induration; massage; electricity. Over the seat of the induration the massage was at first very lightly made, just skinning over the surface, and merely intended to stimulate the circulation, and thus to effect, if possible, an absorption of the exudate.

June 26th.—The bowels began to act spontaneously to-day. He had a large, natural, spontaneous movement this morning.

\*This case has already been previously reported in my paper, *Constipation—its Treatment by the Mechanical Measures*, *Medical Record*, April 8, 1899. It is there case ii. of that series.

†This very strikingly demonstrates what I have maintained above, "that many more persons are constipated than really have an idea that they are so."

September 16th.—The bowels are moving regularly every day. The induration in the groin has disappeared entirely.

He remained under treatment—that is, the mechanical applications were made at intervals of from three to ten days—until February 14th, 1898, when he was discharged. His bowels have continued to act regularly. I saw him but lately, and he informed me that he was perfectly well, and last summer took a long bicycle trip through the Eastern States.

Since the publication of this report I have met him socially at various intervals, the last time only two months ago. He has had no further trouble. His bowels act with great regularity.

CASE 2, April 18th, 1900.—A. P., aged twenty-five years; single; five feet three inches; weight, one hundred and five pounds. No particular occupation; lives at home with her parents, and helps in the housekeeping. She is of a lively disposition, and enjoys going out to parties and entertainments very much. She had enjoyed good health up to two years ago, when she had an attack which the physician in attendance diagnosed as an acute appendicitis. She was sick for nine weeks, and then being convalescent she went to the country and remained throughout the whole of the heated term. When she returned she was in fairly good condition. However, her digestion was weak; she had no appetite, and took but very little food. At intervals of from three to four weeks she would have a recurrence of the pain in the lower abdomen on the right side, which made it necessary for her to take to her bed and to apply an ice bag. After several hours, or even as many as twenty-four or thirty-six hours, she would feel relieved, get up out of bed and resume her usual life. Last summer, while up in the mountains, she had such a seizure, and came down at once to the city to see her physician. As the pains began to recur with greater frequency, she was taken by a relative, some time during the past winter, to see an eminent surgeon, who, after an examination, informed her and her friend that she had a chronic appendicitis with recurrence of acute exacerbations, and that operative interference was absolutely necessary to insure her complete recovery. He urged an immediate operation. Since then she has become rather nervous, as with every seizure she is nearly frightened unto death.

*Status presens.*—She has no appetite, eats but very little, and then in a perfunctory way, because she says “she knows it is necessary for her to eat.” Only at rare intervals, and then mainly when in company, does she experience any craving for food. Her bowels are constipated, and have been so as long as she remembers. Since her illness she has got into the habit of taking some laxative medicine almost every night. She has the pains now at varying intervals, sometimes every three or four days; then, again,

she may remain free therefrom for two or three weeks. Her tongue is always coated and, on awaking in the morning, somewhat dry. She sleeps well.

*Examination.*—Heart and lungs normal. Abdomen nothing abnormal to inspection or palpation. Abdominal walls very flat, no panniculus at all. No tenderness to touch or to percussion anywhere. The seat of the pain referred to above is, as pointed out by her, in the region of the cecum. No pain there now, even on deep pressure. No pain on pressure about rectum. A little of the feces adherent to the finger on withdrawal; had a very sickening and persistent odor. Stomach normally located, no splashing; water 7 oz.; no splashing. Liver and spleen normal and normally located. Right kidney movable to third degree.

April 23rd.—Re-examined abdomen; results the same.

Test breakfast E. and B.; one hour; tube introduced and thirty cubic centimetres of stomach contents withdrawn. Ordinary appearance; bread fairly well worked up. Reaction to blue litmus +; reaction to Congo +; reaction to Phoro-Gluc.-Van. +; reaction to Resorcin—Remet (after Leo) +, pepsin +.

*Diagnosis.*—Atony of the intestines of long standing. Impairment of gastric secretion. Motor function of stomach fairly good, but not quite up to the normal. Flatulence. (No doubt some of the pains—particularly those of short duration—are due to this.) As to an appendicitis, the examination disclosed nothing special; but the history and the names of the attendant leave no doubt as to the character of the illness mentioned above.

*Treatment.*—Dietary. Directions. HCl dilute, ten drops with lunch and dinner, in the way directed. Peptenzyme after meals. Faradaization of stomach. Massage to bowels. Inhibition of all medication to move the bowels.

The treatment was continued on these lines throughout the whole period that she was under observation. Progress was at first very slow. Though no pain was noted over McBurney's point and the appendicular region at the time of the examinations, as recorded, it was elicited subsequently at various times when she came and complained of the pain. Again, her stomach would revolt at the cruelties inflicted upon it in the shape of indigestible food matters ingested in the pursuance of social pleasures and duties. Then, in the earlier period, the peculiar pains that many women suffer prior to menstruation and with its oncoming were complained of, and with these were other factors that test the nerve stability of a person, and these contributed to aggravate the periodical suffering last referred to. On the whole, however, progress was made. Thus, May 31st, the record reads: Doing nicely. She says "she must admit that she is feeling much better." She complains that she has but little appetite. Take a

nux vomica tablet before meals. Take half a glass of beer before she eats her soup. Continue treatment as before.

At another period gastralgie attacks supervened at intervals and had to be combated. She was much troubled with flatulence, both of stomach and bowels; but gradually this mended also. On July 15th the record notes: She is feeling splendid (her own words). Leaves for the mountains in a day or two.

September 9th.—Came in to-day to report. She had a splendid time while away; ate well, slept well, and gained five pounds. She had no attacks of the pain during this whole period. When she felt any slight twinges of it she took an asafetida pill (with which I had provided her previous to departure) and it always relieved her (caused discharge of flatus). Her bowels have been regular. Advised her to continue a preparation of malt for some time to come.

February 9th, 1901.—Patient came in again to-day. She was perfectly well up to four weeks ago, when she again became constipated as a result of negligence on her part. Complains now of some pain across transverse colon. No appetite. Ordered a bitter mixture and gave her a massage.

February 18th.—Again the gastralgie attack. 19th.—Test breakfast as before. Reaction to blue litmus +; reaction to Congo +; reaction to Phoro-Gluc.-Van. +; Free HCl, 24; total acidity, 59. Marked improvement in the gastric secretion. 21st.—Much better; no pain; bowels open. Continue malt preparation and the bitter mixture. February 28th.—She is feeling very well again. She has gained somewhat in weight (two weeks ago 108 lbs., to-day 110 lbs.).

March 15th, 1902.—I saw her to-day at a social function. She has enjoyed good health all this time. "You have made a new woman of me," she said to me.

CASE 3, October 10th, 1900.—O. F. H., aged twenty-five years; single; merchant; height five feet three inches; weight 115 lbs. (about two years ago, 128 lbs.). Had always enjoyed good health. Two years ago he began to be seized at intervals with cramps and diarrhea, which would last for a day and then be over. During the following summer the attacks increased greatly in frequency, to become less frequent with the setting in of the cooler weather. Last May he was seized with a pain in the abdomen more than ordinarily severe, which shifted (his own expression) and finally settled on the right side. A physician was called to attend him, but he was not relieved. After some days he called upon a very prominent surgeon for advice, and, after examination, was informed that he had appendicitis, that an operation was necessary, and that it should be done at early day, the sooner the better. He was very much alarmed thereat, and



went to consult another physician, who put him on a restricted diet, and treated him for quite a long time with medicines, enemata, etc. He was not benefited at all.

*Status presens.*—He is very constipated; has always been so, and is still more so since the onset of this illness. He is much troubled with pains in his bowels, particularly in the right side. These pains come on most frequently at night, and thus his rest is very much broken. Much flatulence. He eats very moderately. His face looks rather haggard, and pain is written thereon.

*Examination.*—Tongue clean. Stomach normally located. Some splashing heard in left epigastrium about the border of the costal arch. (He has himself noticed this splashing sound.) Water 6 oz., splashing to U. Liver and spleen normal.

Belly, nothing abnormal to inspection or palpation. No tenderness anywhere on deep pressure. October 11th.—Test breakfast E. and B. one hour; tube introduced; removed forty cubic centimetres of stomach contents, bread and fluid. Ordinary appearance; settled in two layers; bread one-quarter, fluid three-quarters. Reaction to blue litmus +; reaction to Congo +; reaction to Phoro-Gluc.-Van. +; free HCl, 32; total acidity, 58.

*Diagnosis.*—Atony of the intestines of long standing. Atony of the stomach. Much flatulence (dependent much upon the condition of atony of the digestive tract).

*Treatment.*—Dietary regulations; pepsin-enzyme; nux vomica; massage.

October 21st.—Bowels moving regularly and spontaneously. The intervals of treatment were lengthened out, as good progress was made, at first to once a week, then once in two weeks, and finally once a month until June 25th, 1901, when he was discharged well.

August 20th, 1901.—He had been running around much in the heat the day before, had taken quite a number of cold drinks, and at dinner in the evening had eaten some cold watermelon. Later in the night he was seized with an attack of cramp colic. A physician was called, who gave him some composite tablets, and when I saw him the following morning (the 20th) he was considerably relieved. I prescribed a little rhubarb and soda mixture, with an addition of Hoffmann's anodyne, and kept him in bed. I saw him again in the evening, and he was better, all pain gone. As there was considerable flatulence I directed him to take an asafetida pill and to repeat the same to-morrow in the course of the morning. As a precautionary measure I directed a cold compress to be applied. The next day he was up, but was told to keep in the house for that day (on account of the heat outside) until he should have taken a more substantial meal the next morning.

October 14th.—Patient had another attack the night before, like the one of last August, consequent upon eating an inordinate amount of ice-cream on top of a very large dinner. He took several enemas, moved his bowels freely, and applied a hot-water bag to his abdomen. When I saw him on the following morning (14th) he was rather better, but still suffered considerable pain—cramps. Gave him morphine sulphate, one-quarter of a grain, with directions to repeat in one hour if necessary. Saw him the same evening, and found him free from pain. The cramps had ceased after the first dose, and he had not required and had not taken another. Belly somewhat sore from the cramps, but no particular tenderness over the appendicular region or elsewhere. Some flatulence. To take an asafetida pill. The next morning he was up betimes, and after lunch went out to attend to his business. His bowels are regular, and he has passed several examinations for life insurance with satisfactory results. October 2nd, 1902. I saw him to-day while on a social visit. He has enjoyed health up to the present.

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## THE VAPOR METHOD OF ANESTHESIA.

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BY JAMES TAYLOR GWATHMEY, M.D., NEW YORK.

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THE stated meeting of the Medical Society of the County of New York was held at the Academy of Medicine on Monday, September 25th, 8.15 p.m. Dr. James T. Gwathmey read a paper on "The Vapor Method of Anesthesia." He portrayed the evolution in the administration of anesthetics from the time when chloroform was given "powerfully and speedily," and when an unmeasured quantity of ether was poured into the open cone, up to the present, when each drop of these powerful drugs is both measured and timed. Snow, Clover, Paul Bert, Junker followed in succession, and assisted in eliminating the unknown and placing anesthetics on a firm and solid basis. The Harcourt Chloroform Inhaler in England, the Braum Chloroform-Ether Inhaler in Germany, and the Gigliementi Oxygen-Chloroform Inhaler in France represent the very latest contributions towards the accurate administration of anesthetics. The objection to the French and English Inhalers is, that they are for chloroform alone and use closed masks with valves. The Braum Inhaler is the best, but the mask was undesirable. Dr. Gwathmey then exhibited his own inhaler, the unique features of which are that chloroform or ether can be given singly or combined in any desired proportion; the ability to increase or decrease the air or oxygen without, at the same time, increasing or decreasing the anesthetic; the mask, an anatomically correct-fitting face-piece, the rim of which is hollow and perforated around the inner margin to allow the vapor to escape; otherwise identical with a folding Esmarch mask. This is covered with four layers of gauze, over which is placed a piece of oiled silk or rubber tissue. A small opening is cut in the middle of this gauze, so that, during the induction period, a few drops of chloroform may be added as with vigorous alcoholics. Dr. Gwathmey's Inhaler gives a maximum 2 per cent. chloroform vapor with a minimum of .1 per cent.

The inhaler, which is made by The Kny-Scheerer Company, consists of three ounce bottles, in each of which are four tubes, varying in length from one that reaches the bottom of the bottle to one that penetrates only the stopper. These tubes represent four degrees of vapor strength. The longest, with the mask just described, has an estimated 1 per cent. vapor strength; the shortest, No. 1, representing a very attenuated vapor, one-tenth per cent. As the mask is not air-tight, the vapor cannot be compressed, thus avoiding the danger of an overdose. The advantages of this form of anesthesia are:

1. A pleasant induction stage.
2. Stage of excitement absent.
3. Pulse and respiration normal. No mucous rale or billowy breathing.
4. Complete relaxation.
5. Absence of unpleasant after-effects, on account of the attenuated vapor used.
6. The continued use of an attenuated oxygen or air and chloroform vapor of known percentage, to which an attenuated ether vapor can be added or substituted, when conditions require a change.

7. A possible change in the vapor percentage with the same flow of oxygen or air, by a change of tubes or by varying the pressure in the same tube, or by a combination of the two methods.

In the discussion following, Dr. John A. Bodine urged the desirability of overcoming the element of fear. Dr. Franz Toerek expressed himself as thoroughly satisfied with the method, having used it extensively. Dr. Wallace Lee said that he had often used this form of anesthesia, and had never seen a single case of nausea or any other bad after-effects.

### THE AMERICAN MEDICAL ASSOCIATION BUREAUCRACY vs. PROPRIETARY MEDICINES AND vs. THE INDEPENDENT MEDICAL PRESS.

IN the fierce controversy now raging concerning the relations of medical men to proprietary pharmaceuticals—a controversy which has been made the pretext for an onslaught on the independent medical press by the rule-or-ruin element in the American Medical Association, aided by the *Journal* and its state journal satellites—the *Medical Standard* stands unequivocally for the following propositions:

1. That the attacks on proprietary medicinal preparations by members of the American Medical Association, by the *Journal* of the Association, and by the association's Council on Pharmacy and Chemistry, are inspired by men who fail to distinguish between the right and wrong in a system, and hence indiscriminately condemn the good with the bad.

2. That there are unscrupulous men in the proprietary medicine business, as in all other occupations and all professions; that this unscrupulous element is responsible for medicines which deceive and defraud, and that such medicines cannot be too strongly condemned.

3. That the unworthy and extortionate remedies are an in-

cident of the business, and not a natural product, just as the numerous failures and Shylocks in the medical profession are an incident and not a natural product of medical conditions.

4. That the denunciation of all proprietary medicines because some are bad is as unjust and criminal as would be the denunciation of all physicians because some are knaves.

5. That practically all remedies of merit are proprietary in character, in that nearly all are associated with the name of some manufacturer whose reputation is a guarantee of quality.

6. That, therefore, the essential distinction between so-called "proprietary" medicines and "non-proprietary" medicines is merely in the form of protection the manufacturer may deem most effective in his interest and not in the proprietary principle *per se*.

7. That a distinctive trade name, chosen by a manufacturer for the protection of a distinctive medicinal preparation, is as legitimate, proper, and, at times, necessary as a distinctive name for anything else.

8. That a proper trade name is the domain of medicine, as in that of foods or other merchandise, far from being "unethical," is the essence of good ethics, in that it serves to protect the owner from piracy, the physician from counterfeits and substitutes, the druggists from being victimized, and the patient from being irreparably damaged in purse and health.

9. That whatever will protect the physician in securing precisely the kinds or brands of drugs or preparations he specifies (and this is precisely the protection afforded by trade names), should have his support in justice to his own reputation and to the well-being of his patient, and this regardless of the fiat of men whose devotion to an ethical theory holds all related facts in supreme contempt.

10. That manufacturers, as happily nearly all do, should publish the essential constituents of their preparations as a guide to the physician, though not necessarily the "working formula," or such other specific information as would facilitate piracy; that a trade name should consequently be indicative of the manufacturer or his brand and not of the product itself.

11. That the publication of this information could by no possibility injure any reputable manufacturer, while it would serve to destroy the only excuse for the present crusade against proprietary medicines as a class.

12. That the crying need of reform is not so much with reference to proprietary pharmaceuticals as with reference to the "open" drugs and medicines of the market which are adulterated and degraded to a degree so notorious that medical men have been driven to prescribing reliable proprietary equivalents, even

though higher in price, or to specifying the goods of some particular manufacturer whose products are, as before stated, equally safeguarded by proprietary protection.

13. That even conceding, for the sake of argument, every charge against the proprietary principle in medicines, the incontrovertible fact remains that the physician has no moral or professional right to refuse to prescribe the drug or preparation he believes would prove of the greatest benefit to his patient, and this regardless of whether it is patented, or whether its name is trade-marked, or whether its exact composition is given, or whether it is advertised or not advertised either to the profession or to the laity, or whether it is approved or condemned by any association, committee, council, or group of persons acting for themselves or anybody else.

14. That the defamatory attacks on remedies universally prescribed by physicians of all degrees of distinction in accordance with the principle expressed in the preceding paragraph, are a libel upon the medical profession of America, and justify indignant protest against this attempt to terrorize and coerce medical men into obedience to the arbitrary decrees of a medical bureaucracy which aspires to absorb all power over things medical in this country, but which, unless all signs fail, is tottering to its fall before the fires of revolt everywhere evident among the mass of intelligent practitioners who in this, as in other matters, feel that their right to think and to do as they please, according to the dictates of their experience, or their conscience, must not be infringed by "machine" censorship or threats of "ethical" excommunication.

15. The defamatory policy of the *Journal* of the American Medical Association toward reputable remedies, which have defied the ukase of the Council on Pharmacy, and the persistent vilification of the independent medical journals which have failed to fall into line with its ideas of medical propriety, are signs of autocracy gone mad. The establishment of branch "state" journals as side lights of the central luminary is clearly designed to rivet the bureaucratic fetters more firmly on the profession by crippling or annihilating the independent medical press.

The ring in control of the Association's affairs is pursuing a course as foolish as it is reprehensible; it can hardly hope to foreclose its assumed mortgage on the intelligence and rights of the medical men of America who have become very weary of dancing attendance on the royal medical family at the sessions of the American Medical Association, and weary also of relying on the Association organ for such recognition as the said organ in its superlative wisdom may deign to bestow.

The *Medical Standard* replies to the *Journal* and "state journal" propaganda of the past year with a paid subscription list showing a larger increase for 1905 than in any previous year in its history, and with a larger line of high-class advertising than ever before. For 1906 it has every prospect of unprecedented development.

The *Medical Standard* long ago announced its independence; it meant it then, and it means it now.—*The Medical Standard*, Chicago, January, 1906.

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### A MEDICAL ESTIMATE OF PRAYER.

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At the recent annual meeting of the British Medical Association a testimony was given to the therapeutic value of prayer which should be recorded over against the skeptical views of some scientists. Dr. Theodore B. Hyslop, Superintendent of Bethlem Royal Hospital, has a reputation as a specialist in neurology and in the treatment of mental disease which adds weight to his words: "As an alienist and one whose whole life has been concerned with the sufferings of the mind, I would state that of all hygienic measures to counteract disturbed sleep, depressed spirits, and all the miserable sequels of a distressed mind, I would undoubtedly give the first place to the simple habit of prayer." It matters not, in Dr. Hyslop's view, what are one's theological conceptions—anthropomorphic or rationalistic—of the infinite environment with which prayer attempts to commune; the effect is the same: "Let there but be a habit of nightly communion, not as a mendicant or repeater of words more adapted to the tongue of a sage, but as a humble individual who submerges or asserts his individuality as an integral part of a greater whole. Such a habit does more to clean the spirit and strengthen the soul to overcome mere incidental emotionalism than any other therapeutic agent known to me."

Mediaeval superstition, connecting medical art with magic supposed to be learned from evil spirits, used the proverb, "*Ubi duo medici, tres athei*." In some quarters this stigma is not yet entirely effaced, and medical men are perhaps not fully free of responsibility for whatever of it lingers. On the background of such a history Dr. Hyslop's testimony before an audience of specialists is highly significant of the trend of scientific thought away from materialistic conceptions of mind and of religion. "I believe it," said he, "to be our object, as teachers and physicians, to fight against all those influences which tend to produce either religious intemperance or indifference, and to subscribe, as

best we may, to that form of religious belief, so far as we can find it practically embodied or effective, which believes in 'the larger hope,' though it condemns unreservedly the demonstrable superstition and sentimentality which impede its progress."

Not many years ago Professor Tyndall's challenge of the religious world to try a prayer-test on a selected number of hospital patients was deemed by many, upon its being declined, to have refuted the claim of a healing power in prayer. As a physicist, Tyndall was, on this subject, not within his own province, as Hyslop, a psychologist, is. Religious men, to be sure, have made extravagant claims, and scientific men also have shot beyond the mark. But Dr. Hyslop's competence to speak in the name of science is unquestionable, and what he affirms as a discovery of medical science is identical with the immemorial faith of religion, that there is a place for prayer in the very nature of things. Not only does he find this place to be foremost among restorative agents. Of the religious enthusiasm which the nature of prayer is to feed and sustain he affirms that it "embodies the most healthy and preservative development of our social forces." Among the many notable utterances in which science is now exorcising herself to be the handmaid of religion, these, the most recent, are as memorable as any,—*Outlook*, New York, Sept. 16th, 1905.

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**Leucocythemia Treated by the X-Rays.**—C. H. Melland (*British Medical Journal*, July 1st) reports four cases of this condition in which the X-rays were used, with good results in three cases. In each case the spleen diminished in size with improvement in the character of the blood, the degrees of improvement differing in the three cases. The improvement in the general health of the patients, however, was more marked and of greater importance than the changes in the blood or in the spleen. He states that though it is too soon to assert that permanent benefit has been conferred in these conditions, it can safely be asserted that great amelioration of the conditions may be secured and that even if complete cure be not effected, the patients may have months or even years of comfortable existence.

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#### OVERHEARD.

Sentimental Mother: "And if I should die, would you care to have another mamma in my place?"

Sensible Little Daughter: "Not at first, mamma; after a while I should like to have a nice, new mamma; but, then, I'd put hundreds of flowers on your grave, you know."



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## Editorials.

### SANITATION OF RAILWAY CARRIAGES IN ONTARIO.

From the fact that tubercular people travel by rail to and from the Gravenhurst Sanitarium, as well as other sanatoria outside this Province, and that many people suffering from tubercular diseases of the air-passages frequent railway carriages on the different railway lines in Ontario, some professional interest

inheres in the question of how far the railway carriage used in this Province may be an agent in the dissemination of tuberculosis. Up to the present time no Canadian bacteriologist has tackled this subject, and, unless the bacteriologist of some university in the eastern part of this country should supply the data, the editors of Canadian medical journals must seek them in the United States or in Europe.

However, it is reasonable to think that if the methods of cleaning and disinfecting Pullman and C. P. R. sleeping cars used in Ontario were applied to ordinary passenger cars, dining-cars and mail-cars, used by the Grand Trunk Railway and the Canadian Pacific Railway, then such cars would not be agents in the dissemination of tuberculosis. The only railway companies carrying passengers in Ontario are the Grand Trunk Railway and the Canadian Pacific Railway. The sleeping cars used by the Grand Trunk Railway on the Gravenhurst route, or any other of their lines in Ontario, are the property of the Pullman Company of Chicago. The cars of this latter company, placed on Ontario routes, are cleaned and disinfected after each trip at terminal points, Montreal or Detroit, according to the admirable system of cleaning and disinfection adopted and carried out by the Pullman Company.

Pullman cars operated on lines of health resorts, frequented by people seeking relief from tuberculosis, are fumigated after each trip with formalin, the berths being opened and the bedding spread so as to expose as much of its surface as possible. This regulation also applies to Pullman cars passing through any section of the country in which a contagious epidemic may be prevailing.

The cleaning of the ordinary passenger cars of the Grand Trunk Railway does not rest with the Pullman Company, but devolves on the company to which they belong. Ten years ago, a report on the hygiene of Canadian railways was presented to the Ontario Board of Health. (See Fifteenth Annual Report of the Provincial Board of Health of Ontario, 1896, p. 82.) The following extract from a letter sent by the Grand Trunk Railway of Canada was part of that report:

" Passenger cars are cleaned at the end of every trip. These trips are from one hundred to three hundred miles in length.

Sleeping cars, which run longer distances, are also taken care of by the porters in the cars. The floors of all ordinary passenger cars are washed daily, and every two or three weeks the panelling and ceilings are also washed. The upholstered seats are taken out, beaten and aired, about once a week. The closets are washed out with soft soap and water daily; but *systematic disinfecting* is not followed. In sleeping cars, the whole of the upholstery, bedding and carpets are removed from the car, beaten and aired once a week."

Now, inasmuch as the above method of cleaning Grand Trunk ordinary cars and dining-cars, without systematic disinfection, is still in force, and, inasmuch as tubercular people travel by these cars every day in the year, would it not be well for the Grand Trunk Railway Company to thoroughly and scientifically disinfect all their passenger cars in addition to the ordinary method of cleaning them?

Kinyoun, who recently made a report on a bacteriological examination of dust taken from American railway carriages, found the tubercle bacillus in dust, taken from a sleeping-car, in which cases of tuberculosis had been carried to the Southern health resorts, though there was no evidence that any such cases had been carried on the particular trip which preceded the collection of the infected dust. If the bacillus tuberculosis, in a viable condition, adheres to the dust of a disinfected sleeping-car, how long will it be found in an active, infective condition in ordinary passenger cars and dining-cars, which are rarely, if ever, disinfected? The answer to this question should be given by a competent bacteriologist. Our contention is this—when sanitary measures for the disinfection of sputum are enforced in a passenger car, the dust in the air is of secondary importance; but where carelessness in this regard obtains the danger of infection by the bacilli tuberculosis is a real one. Thus experiments conducted by Dr. J. H. Hance, at the Adirondack Cottage Sanitarium (*Medical Record*, December 28, 1895), show that five of the ten guinea pigs inoculated with dust from the oldest cottage, which was occupied by a man who had been complained of for promiscuous spitting, became tuberculous. Those inoculated with the dust from the other buildings gave negative results. Now promiscuous spitting is the rule instead of the exception in passenger cars. The conclusion is obvious.

What is true of the presence of the bacillus tuberculosis in passenger cars and dining-cars applies even more strongly to other infections. Thus Kinyoun states that samples of dust from the air of various American coaches were collected and were inoculated into 96 animals. One of these developed tuberculosis; 8 a pneumococcus infection; 4 a staphylococcus infection; 5 a general septicemia, and 1 malignant edema—76 animals gave negative results. It is interesting to note in Kinyoun's report that the greatest number of pneumococcal infections from the air of cars was obtained from smoking-cars, where promiscuous spitting is most indulged in.

A C. P. R. sleeping-car, making, for instance, the trip from Vancouver to Montreal, is cleaned at the latter terminal in the following manner:

(a) It is first stripped of everything movable; the only things, not wood or metal, non-removable, being the plush arm rests.

(b) It is then thoroughly swept and brushed out.

(c) After which it is blown out by means of compressed air.

(d) In the meantime the equipment, which has been removed, is put through the same process.

(e) The car is then washed inside and out.

(f) Once a fortnight each car is fumigated with formalin, by means of a generator.

All travellers by this line, suspected of being ill, must be reported by porters, conductors, agents, or district superintendents and, even if a doubt exists, the compartment occupied by the sick person is closed. The equipment, however, is first removed, and if the illness should prove to be a serious contagious disease, the bedding is destroyed.

In reference to ordinary passenger cars, dining-cars, smoking-cars and mail-cars belonging to the C. P. R., a fortnightly disinfection with formalin should be employed, subsequent to the liberal use of soap and hot water to wood and metal surfaces.

J. J. C.

## COLLOIDAL SILVER IN VARIOUS SEPTIC INFECTIONS.

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COLLOIDAL silver (Collargol), which is finely divided metallic silver, was introduced by Cr  d   as an antiseptic in 1898. By the process of trituration, metallic silver is converted into a soluble form, making, with water, a brownish solution. In this form it is used in internal hypodermic medication— $\frac{1}{2}$ -1 per cent. (10-30 m.)—or the colloidal silver is made up as an ointment.

|                        |                    |
|------------------------|--------------------|
| R Arg Colloid.....     | $\frac{5}{10}$ iv  |
| Aq destill.....        | $\frac{5}{10}$ i   |
| Cere Albe.....         | $\frac{5}{10}$ iis |
| Adipis Benzoinati..... | $\frac{5}{10}$ iis |

Simpler ointments may be made with vaselin or lanolin, the latter making one of the best bases.

The ointment is rubbed into the flexor surface of a limb for from twenty to thirty minutes. It has been found useful in the treatment of lymphangitis, boils, septicemia, puerperal fever and other septic processes.

Professor Moosbrugger has obtained good results from the medicinal treatment of appendicitis by collargol. His experience, which consists exclusively, or almost so, of the liberal employment of collargol, in acute and chronic cases of appendicitis has been obtained during the past five years.

In his series of 70 to 80 cases of varying severity, only 2 ended fatally, and, in both, diffuse peritonitis had set in when he was called. In the majority of his cases, the focus of disease was entirely cured. He now feels justified in giving a good prognosis in an appendicitis which has not progressed to a diffuse peritonitis, and in which a profound general infection is not present.

As to the mode of action of collargol, Moosbrugger thinks that it combines with, or otherwise neutralizes, a certain proportion of the reabsorbed toxins in the blood, or the fluids of the tissues. The patient's color, facial expression and general condition improve, coinciding with an increased power of self-help in the organism. A favorable action on the focus of the disease and the neighboring tissues has also been observed.

A plausible explanation of the action of collargol was given by Schade lately. He proved that the heavy metals, under certain conditions of oxidation, act in the human body as carriers and transferers of oxygen, and that, without change in chemical constitution, they play the part of the so-called ferments, the organic oxygen-bearers. Under these conditions they rob ptomaines of their toxicity, since these substances are readily oxidized.—(*Munch. Med. Woch.*, Sept. 12th, 1905.)

G. F. (*La Presse Médicale*, December 30th, 1905) expresses a favorable opinion of the results he has obtained in puerperal infections from the intravenous injection of solutions of collargol. He employs a 1 per cent. solution and injects 0.06, 0.10, and even 0.15 centigrammes of collargol in grave cases of infection. Generally in four or five hours after the injection is given a slight, passing elevation of temperature is observed, and, occasionally, there are chills. However, Cealic and Dimitriu, who are promoters of this line of treatment in infections, think that the febrile reaction is a good sign, for it shows that the vital energy of the organism is sufficiently great.

G. F. prefers to inject the collargol into the internal saphenous instead of the median cephalic vein. The saphenous, having been exposed over a malleolus internus by an incision of three-quarters to one inch in length, is raised and incised; a canula is then introduced into its lumen and the injection of collargol pushed home. Two ligatures are placed around the vein and the external wound is afterwards sutured with catgut. This method of doing the operation prevents the escape of the collargol from the vein; it also obviates painful infiltrations, as well as sloughing at the site of the injection. In one case of puerperal infection, in which the patient had chills, a temperature of  $104^{\circ}$  F., filiform pulse and delirium, intravenous injection of collargol, done on two occasions, proved curative. In other cases, collargol caused the disappearance of septic fever, even after the disease had existed for some days.

Collargol may also be administered per os, the prescription being 15 grains of collargol in 6 ozs. of water, a tablespoonful every half hour or hour. In advanced cases, a stronger solution is used, containing 30 grains of collargol in 6 ozs. of water;  $2\frac{1}{2}$  drachms every hour. Crede ointment, a 10 per cent. prepara-

tion of collargol, is also rubbed into the flexor surfaces of the arms or thighs for thirty minutes.

When vomiting interferes with the retention of a solution of collargol, the medicine may be given in an enema. Thus, 15 grains of collargol in 4 ozs. of water may be administered in one enema, or may be divided into two equal parts and given as two enemas.

J. J. C.

### **SPECIAL MEETING OF THE PROVINCIAL BOARD OF HEALTH.**

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THE Provincial Board of Health met at the office of the Board in the Parliament Buildings at 11 a.m., February 15, 1906. The following members were present: Dr. Kitchen, Chairman; Dr. Hodgetts, Secretary; Dr. Cassidy, Dr. Oldright, Dr. Thompson, Dr. Boucher, Dr. Douglas. The special objects of the meeting were to receive the report of the Committee of Legislation and the report of the Committee of Sewage and Water Supply (East.) As these committees were not ready to report, the Board adjourned until 2.30 p.m.

The Board spent the afternoon in committee of the whole, framing, amending and discussing several amendments to the Ontario Health Act. The amended Act will be presented to the Legislature during the present session. Several important amendments here were likewise made in the Cemeteries Act, which will likewise be presented to the Legislature.

The Board reassembled at 10 a.m., February 16, and spent an hour listening to addresses by Charles E. Rust, C.E., Toronto, and Dr. Charles Sheard, M.H.O., who spoke on the disposal of the sewage of Toronto. Mr. Rust expressed his own opinion in favor of the discharge of raw sewage into Lake Ontario from a trunk sewer, which would enter the lake near Victoria Park. If the Provincial Board of Health would consider this plan, it would simplify the scheme of disposing of the city sewage, and would certainly make it much less costly. Three other plans for disposing of Toronto sewage were described. Dr. Sheard disapproved of the plan of discharging raw sewage into the lake at Victoria Park.

The Board adjourned to permit the Committee on Sewage (East) to elaborate the report on the disposal of the sewage of

Toronto. On reassembling at 2.30 p.m. the report of the Committee on Sewage was presented by Dr. Oldright.

The committee approved of plan 2 of the City Engineer's schemes for the disposal of Toronto sewage. This plan embraces the construction of septic tanks in the vicinity of Ashbridge's Bay, near the Woodbine, and the purchase of 500 or 600 acres of land immediately north of Danforth Avenue in the vicinity of Woodbine Avenue, to be used as filter beds, the sewage to be lifted to this point. The land proposed to be purchased is of a sandy, gravelly nature, and admirably suited for the purpose. The figures in connection with the scheme would be as follows:

|                                       |                          |
|---------------------------------------|--------------------------|
| Capacity of intercepting sewers ..... | 100,000 gallons per day. |
| Capacity of septic tank .....         | 31,250,000 " " "         |
| Capacity of pumping plant .....       | 37,500,000 " " "         |
| Capacity of forcing main .....        | 25,000,000 " " "         |
| Capacity of filter areas .....        | 25,000,000 " " "         |
| Cost of high level sewer .....        | \$731,541                |
| Cost of low level sewer .....         | 257,100                  |
| Cost of septic tank .....             | 344,700                  |
| Cost of force main .....              | 120,000                  |
| Cost of filter area .....             | 265,000                  |
| Cost of pumping station .....         | 355,000                  |
| Net total .....                       | \$2,073,341              |
| Gross total .....                     | 2,384,342                |
| Annual cost .....                     | 76,000                   |

The committee recommended Engineer Rust's scheme upon assurance that the soil is suitable and with the promise that the city will install properly constructed filter beds with thorough under-drainage, and will provide for the efficient maintenance of the same.

The report of the Committee on Sewage (East) was received and adopted.

Dr. R. P. Boncher and Dr. Charles Hodgetts had been appointed to make an examination of the water supply of the town of Prescott. They reported that Prescott water is polluted and recommended that the matter of purification by the proper authorities be at once taken up.

Dr. R. A. Reeves, Dean of the Medical Faculty of the University of Toronto, requested Dr. Kitchen, the Chairman of the Provincial Board of Health, to accept the position of vice-chairman of the Section of Public Health and Hygiene at the August meeting of the British Medical Association in Toronto. Dr. Kitchen declined the honor. The Board then adjourned.

J. J. C.



### MEETING OF THE TORONTO MEDICAL SOCIETY AT ST. MICHAEL'S HOSPITAL.

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THE Toronto Medical Society met at St. Michael's Hospital, at 8.45 p.m., January 18th, the President, Dr. Ralph Hooper, in the chair. Dr. Price Brown showed a patient, a gentleman, upon whom he had operated for deflected nasal septum, November 15th, 1905. The result was satisfactory, the left nostril, which had been occluded prior to the operation, being pervious. The operation, which had been done under chloroform anesthesia, was of a plastic character. The occluding septum in the left nostril was divided by an H-shaped incision, and, after being pushed away from its faulty location, was placed in a vertical position. A rubber splint was introduced to maintain the septum in its corrected position. Rubber was preferred to celluloid, as it is impermeable, and yet yielding. The case was discussed by Drs. Ryerson and Wm. McDonald.

Dr. Silverthorn exhibited three patients. The first had received so severe an injury to the right forearm that amputation had been deemed necessary. One of the wheels of a heavily-laden waggon had passed longitudinally over the man's forearm, crushing every shred of tissue on its anterior surface, except the pronator quadratus and the ulnar nerve. The skin, muscles and other tissues on the posterior surface of the forearm had been pulpified and had consequently sloughed. Amputation being refused, Dr. Silverthorn treated the injured parts antiseptically, and also practised skin-grafting. Owing to the absence of other tissues, some of the grafts had to be placed on the periosteum of the radius, and some on the periosteum of the ulna. The man's forearm had been successfully covered with skin. No muscular action was obtainable in the forearm, although several useful movements of the wrist and hand could be effected. A second specimen of conservative surgery exhibited by Dr. Silverthorn was in a young woman, from whom he had removed a myeloid sarcoma of the right shoulder-joint. A free removal of the upper end of the right humerus had been done, yet the patient could move her arm anteriorly and posteriorly, although, owing to the absence of the right deltoid muscle, horizontal movement of the right arm could not be made.

Dr. Silverthorn also showed a case of tubercular peritonitis, which had been improved by medical treatment. Drs. Dwyer, Oldright, McKeown and Chambers discussed this case, the general opinion expressed being opposed to surgical interference in tuberculosis of the peritoneum.

A patient with an eruption on the mucous surface of one of the cheeks, was exhibited by Dr. Fletcher (Secretary), who asked for a diagnosis of the case. Dr. Ryerson said he thought it was a case of psoriasis.

Dr. H. B. Anderson presented a man of about 50 years of age, a painter by trade, much given to the use of tobacco, whom he had treated for chronic myocarditis. He thought that la grippe might have been the exciting cause of the disease.

Dr. Dwyer discussed a case of pneumothorax, which had occurred in a youth of 17, as the result of an injury to the thorax. The result was yet in doubt.

Dr. A. Lorand, Consulting Physician of the Carlbad Springs, Bohemia, who was present at the meeting, spoke at length on the etiology and treatment of diabetes. He was heard with much interest.\*

Refreshments were served.

J. J. C.

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### EDITORIAL NOTES.

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**Protection of Grade Railway Crossings.**—A frightful accident occurred at a grade railway crossing, near Upton, Quebec, January 9th, 1906. The Portland-Montreal express train struck a carriage at the crossing, hurling the unfortunate occupants nearly a hundred feet into the air, killing and frightfully mangleing three of them. There is nothing novel in the accident at the Upton crossing. In many of us the sentiment of pity, common to all, is briefly stirred by the recital; but we should scrutinize it more closely, for, to-morrow, lives near and dear to us may be crushed out at a grade crossing in Toronto. Railway companies are influential in quarters where influence is worth having. They stuff the pockets of legislators with passes;

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\* Dr. Lorand's pamphlet, "*Le Traitement Rationnel du Diabete*," was reviewed in this journal, September, 1903.

in a suit for damages the railway side of the case is defended by the best legal talent. The stockholders of railways call for dividends, and vote down expenditures for track improvements, which do not contribute to the earnings of the railways. To a railway company a grade-crossing is part of a useful public work, maintained at their expense—dangerous, if you will, when trains rush by on it; but, then, people crossing it in vehicles or on foot should refrain from frivolous conversation and reflect on the danger of their situation.

**Graphology as an Aid in Making Out a Bill for Medical Services.**—Although some people think that graphology is not a science, Dr. Quintard, Antwerp, thinks it has its uses in the art of making a diagnosis. Instances are given to show that a diagnostician can, in dealing with a new patient, derive more accurate information about his ailment from a study of the patient's handwriting than from the replies he makes to leading questions. Whatever the clinicians may think of this view, there can be no doubt that graphology may be useful to physicians when engaged in the delicate operation of making out a bill for medical services. For, in such cases, a physician naturally likes to have a clear notion of the real character of his patient, and graphology can reveal it, just as writing is reflected in a looking-glass. Therefore, before writing out a bill, a careful practitioner should, if possible, study the handwriting of his patient. If the finals of the words are partly juggled, the letters crammed together closely, with very little spacing, if there is little or no margin, and if he notices that the initials at the bottom of the page are written with a shabby, complicated flourish, the physician may conclude that his patient is a miser, and to keep on good terms with him he should make his charges low and use the minimum tariff. If the handwriting is fine, chaste, clear, without prolonged finals, with well-linked letters, one may conclude that the client has a noble, judicious mind, capable of appreciating the labors of the physician at their just value. Finally, if the letter is written in a large hand, widely spaced, showing plenty of white, with very few lines on each page, and very few words in each line, one may conclude that it is the writing of an individual who is not fond of calculating, and who would expect to be charged—a royal fee.

**Hygiene and the Bedroom.**—The ordinary hotel bedroom, or, for that matter, the bedroom in a good many private houses is not a thing of beauty; from the hygienic standpoint, it is a source of sadness. Dusty carpets, window curtains rarely cleaned, arsenical wallpaper, redolent of tobacco smoke, are not conducive to healthy dreams. The bed chamber of the twentieth century is to be a picture of simplicity, blended with taste. There will be no microbe-catching carpets to dust—just a washable rug beside the bed. The waxed floor will be mopped every morning with a damp, woollen cloth. The ceiling and walls of the bedroom will be painted white, with lacquer paint, which can be washed without spoiling the color. The window curtains will be of cotton or other washable fabric, and will be regularly sent to the laundry. The iron bedstead, with its woven-wire mattress, will contain just the needful quantity of bedclothes. Then a new feature for most of us will be that arrangement of the bedclothes introduced by the Germans, by which the upper sheet becomes a bag, in which the blanket is spread, so that only washable white linen comes in contact with the body of the sleeper.

**John Burns and Vaccination.**—Out of the hurly-burly of British politics John Burns has been thrown on the Cabinet tapis as President of the Local Government Board, which has charge of health matters in the United Kingdom, and, therefore, his views on sanitary and medical matters are of great importance. It appears that the following question was sent up at the end of one of his election meetings: "Will Mr. Burns vote for the repeal of the Vaccination Acts?" and his answer was, "Personally, I have always been opposed to vaccination, and I shall do my best in the direction of my own private views." Spoken like a man; but whatever Mr. Burns' private views on vaccination may be, and he cannot know much about that subject, his acceptance of office must be taken as evidence that he is prepared to administer the existing Vaccination Acts. However, the fact that an avowed anti-vaccinationist is in the hygienic saddle and riding the Local Government Board steed, looks very much like a snub to the members of the medical profession of the United Kingdom. Their ideas and his on vaccination differ *toto coelo*. Is it not time, that a Minister of Health should

have charge of medical and sanitary matters in the Local Government Board of England? Cannot British physicians unite even on the subject of vaccination? If Mr. Burns is true to his medical opinions, we may expect him to do his best to repeal the British Vaccination Act.

**How Medical Advertising Affects the Physician.**—A great deal of attention is paid nowadays to the advertising of proprietary medicines in medical journals. It will not be denied that much art and skill are employed in the manufacture of many of these preparations. It is, perhaps, regrettable that they are so numerous, but the physician, particularly if he be under forty, is not afraid of novelty in a drug, and will welcome it, so long as it holds forth the promise of victory over disease. As long as the drug manufacturer places before him in reputable medical journals a plain statement of the chemical composition and pharmaceutical character of a proprietary preparation, the reasonable physician does not object. His own studies in chemistry, physiology and pharmacology inform him whether or no the advertised drug is likely to accomplish the effects, claimed for it by its designer. His experience as a therapist will soon tell him whether it is more agreeable to patients, more potent in curative results than older arms of precision. Naturally, he does not care to be informed as to the applicability of a drug to the cure of diseases in pamphlets, labels or loose printed sheets. After studying the volumes of Stillé and Maisch, Butler and Brunton, and other pharmacologists and therapists of renown, he is loath to pick up ideas from the wrappers placed on packages of medicine. It might be more flattering to his self-esteem if the discovery of the fitness of an advertised drug for the cure of a special pathological condition were left to himself, instead of being suggested by the advertiser; but, anyway, if the suggestion appears in a medical journal, if the advertisement does not stare stonily at him from the columns of a daily paper, he feels that the manufacturer is not taking an unfair advantage, and that his representations may merit attention. The practising physician knows perfectly well that no matter what may be said by travelling agent, or written by advertiser, no matter what claims may be made in behalf of the new drug, even by well-known clinicians who have used it, the court of last appeal is himself. A drug may stand even in

the scales; it may show signs of might and worth. If the reverse be true, if the drug be of the gossamer variety—of little utility, made to sell—its vogue will be short. No self-respecting practitioner of medicine cares to prescribe a drug, regularly advertised in the daily papers, weekly journals and monthly magazines. Improbable statements appear in such advertisements, meant to capture the popular eye and fire the popular fancy. Even if he were inclined to try a preparation so advertised, he feels a sense of humiliation in placing himself in the same category with the patient for whom it is ordered. If he does conquer his repugnance and order it for some patient, is the latter not justified in proclaiming that the columns of secular journals are luminous with therapeutic gems, as well as other contributions to useful knowledge?

**An Improved Form of Medical Society Meeting.**—For some time back the medical societies of Toronto, to vary the monotony of their ordinary routine, have been devoting some of their meetings to the exhibitions of clinical cases at the city hospitals, followed by discussions. The writer, who attended a meeting of the Toronto Medical Society at St. Michael's Hospital, January 18th, 1906, was favorably impressed with the proceedings. The President in the chair, a well-seated, well-lighted room, free from noises, the exhibition of cases, illustrative of present-day practice, special and general, followed by discussion or criticism, sharp but not unfriendly—all disposed of in two hours—is as much superior to the old-time method of conducting a meeting of a medical society as the teaching of medicine and surgery by clinical methods tops mere didactic instruction. With the growth of the hospital in city, town and village, this new method of conducting the medical business of a medical society will naturally become general. The cases, medical and surgical, are at the hospital, the reports of the cases are kept there, promptly available when required by a speaker, the building is centrally located for most members, and, best of all, there is abundance of live material, with some not alive, to keep one's attention from wandering. A tariff of fees, a reception tendered to a distinguished foreign physician, or arrangements for the meeting of a great medical association may provide fuel for eloquence at ordinary medical meetings. To properly follow the trend of a medical or surgical paper calls for

clinical cases just as illustrations are called for in a medical book. To few medical men is it given to so express their ideas, that they can be clearly understood, unless they have examples by them to serve for further elucidation of the subjects. The peculiar propriety of the clinical meeting of a medical society at an hospital is, that the members who are not fond of talking can use other senses than that of hearing, and leave the meeting with a feeling that they have acquired proteid food for thought.

**The Essentials of Cure in Tuberculosis.**—Fresh air, sunlight and good food being the essentials in the treatment of tuberculosis, it would be a good thing if physicians were to preach the advantages of a fresh-air life to their tubercular patients. Life in a tent is just a return to the habits of our forefathers, sprung from the robust races who peopled Europe. It does not hurt anyone to sleep in a tent, though most people prefer a brick house. However, a tent is more easily ventilated than a mansion. Rebreathed air is an active poison, but most people, well and sick, have a horror of pure air in their homes, especially in their bedrooms. Yet fresh air during the night, as well as the day, is useful in preserving health and is an essential feature in the cure of tuberculosis. The method suggested by Dr. Cotting of raising the lower window sash a few inches, and inserting beneath it a board the width of the window secures a considerable ventilating space between the two sashes at their point of junction. By applying a board, slanting downward and outward to the top of the window frame, and lowering the upper window-sash a second ventilating opening is secured. A married lady (tubercular), who slept in a tent, erected on the shore of Lake Ontario, near Toronto, last summer and autumn (1905), was so much benefited by tent-life that she is spending the present winter—1905-6—in a tent, erected on the lawn, at the back of her home in Toronto. And why not? A double-roofed, double-walled Peterboro' tent, warmed by a stove, can be made quite comfortable, even in the coldest weather. Every Canadian who gets tuberculosis is not able to set up a tent in California or Colorado. And, even if he were, the essentials of cure are the same in Canada as in countries to the south and west of it. Besides, residence among strangers, in a strange land, can rarely, if ever, secure to the tubercular exile that kindly sympathy which assists materially in restoring health to the sick.

J. J. C.

# Obituary

## MRS. CRAWFORD SCADDING'S DEATH.

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ON the morning of Wednesday, the thirty-first of January, Mrs. Scadding, wife of Dr. H. Crawford Scadding, passed away after an illness of only three weeks. Her untimely death was due to erysipelas complicated by pneumonia. Dr. Scadding and his little daughter have extended to them the heartfelt sympathy of the entire medical profession of this city in their intensely sad bereavement.

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## FAMOUS SURGEON, DR. FOWLER, DEAD.

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DR. GEORGE RYERSON FOWLER, Brevet Brigadier-General and Surgeon on the staff of Major-Gen. Roe, of the National Guard, member of the State Board of Medical Examiners, and one of the best known surgeons of Brooklyn died on February 6th, Albany, N.Y.

Dr. Fowler had undergone two operations for appendicitis. His condition was most serious from the outset, owing to intestinal paralysis, which the operations failed to relieve.

At the outbreak of the Spanish-American war, Dr. Fowler applied for army service. His offer was quickly accepted, and he was made chief surgeon of the volunteer army, joining Gen. Lee, commanding the Seventh Army Corps. He sacrificed his large practice in Brooklyn, and served throughout the war, receiving his discharge in January, 1899, when he again took up his practice.



## ❧ News of the Month. ❧

### BRITISH MEDICAL ASSOCIATION.

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THE preliminary arrangements as to special fares, side trips, etc.

1. Fares, Going Dates and Limits.—(a) Domestic business certificate plan arrangements; free return regardless of number in attendance. Passengers going by rail, returning by R. and O. Navigation Co., or *vice versa*, rate to be one and one-half fare.

(b) European Business.—On presentation of certificate, to be prepared and signed by the Secretary of E. C. P. Association, and countersigned by the Secretary of the Canadian Committee, or the Secretary of the British Medical Association, one-way tickets to be issued at one-half lowest one-way first-class rail fare; round trip tickets at lowest one-way first-class rail fare between all points in Canada. Rates to Pacific Coast subject to concurrence of T. C. P. Association. Steamship lines to advise Secretary what, if any, additional arbitraries are required.

Dates of sale, July 1st to September 30th, 1906, inclusive. Final return limit, September 30th, 1906.

2. Extension of Time Limit.—On deposit with joint agent of Standard Convention Certificates, issued from points in the Maritime Provinces, from all points west of Port Arthur, and from points in the United States, on or before August 28th, 1906, and on payment of a fee of \$1 at time of deposit, an extension of time until September 30th to be granted. Joint agency to be conducted in the name of G. H. Webster, Secretary, E. C. P. Association, will be kept open from August 21st to September 15th, 1906.

3. Side Trips.—Side trip tickets to be sold from Toronto to delegates from the Maritime Provinces, from all points west of Port Arthur and from the United States, on presentation of validated certificate, or deposit receipt, at lowest one-way first-class fare for the round trip, to all points in Canada. Dates of sale, August 23rd to September 1st, 1906, inclusive; return limit, September 30th, 1906.

Usual additional arbitraries *via* upper lake steamships to apply, viz., Going lake, returning same, \$8.50 additional to be collected. Going lake, returning rail, or going rail, returning lake, \$4.25 additional to be collected. Also usual arbitraries *via* St. Lawrence route for delegates desiring to return by steamer, on

presentation of tickets to purser, viz., \$6.50 Toronto to Montreal; \$3.50 Kingston to Montreal.

Via Northern Navigation Company on lines where meals and berth are not included, the rail rate will apply; on lines where meals and berth are included, rate to be single fare plus meal and berth arbitrary.

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### INTERNATIONAL MEDICAL CONGRESS.

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ARRANGEMENTS are being completed with regard to this fifteenth Congress, which meets in Lisbon from the 19th to the 26th of April. The principal general addresses will be delivered by Sir Patrick Manson, London; Prof. Brissand, Paris; Dr. Jose Maria Esquerdo, Madrid; Dr. P. Aaser, Christiania; Prof. Azevedo Sodre, Rio de Janeiro; Prof. Neumann, Vienna; Prof. Prince Jean Tarcharoff, St. Petersburg; Prof. E. von Bergmann, Berlin.

The different nationalities are well grouped, and we observe that the delegates from Great Britain, Canada, Australia and the British Colonies will have a common meeting-place.

As to the service of lodging, it will be in charge of M. Manuel Jose da Silva, Praca dos Restauradores, Palacio Foz, Lisbon, to whom may be addressed all correspondence on this subject.

Applications for membership will be received until the hour of the opening of the congress and during the congress, but in order to secure reductions granted by railways and navigation companies it is necessary to give your name as soon as possible. All such correspondence may be addressed to the Secretary-General, M. le Professor Miguel Bombarda, Nova Esola Medica, Lisbon.

Regarding the fetes and receptions which will be given in honor of the members of the congress, it is announced that there will be three general fetes and there will probably be several receptions and dinners de gala. A bull fight, according to the old Portuguese way, will be organized at the expense of the congress. The definite details will be published at a later date.

We understand that a number of Canadians have already decided to attend the congress. Any member of the profession in Canada who desires to join the Canadian committee is requested to communicate at an early date with Dr. A. McPhedran or Dr. W. H. B. Aikins of this city, who will be glad to furnish all available information.

## *Items of Interest.*

**The Quarterly Journal of Inebriety Changes Hands.**—Dr. T. D. Crothers, of Hartford, Conn., has sold the *Quarterly Journal of Inebriety* to Richard J. Badger, of Boston, Mass. The *Journal* is the official organ of "The American Society for the Study of Alcohol and Other Narcotics." Dr. Crothers will still continue to edit the *Journal*.

**The New York Post-Graduate Medical School and Hospital.**—The Board of Directors of this institution have recently issued their annual report, and it is well worthy of careful perusal. The New York Post-Graduate Medical School and Hospital is doing good work, and, therefore, growing rapidly in popularity as a post-graduate teaching body.

**Therapeutical Notes on New Remedies.**—This is the title of a pamphlet issued by C. J. Hewlett & Sons, of Charlotte Street, London, England. This firm has been established since 1832, and, therefore, requires no commendatory word as to the goods they manufacture. They are the best, and the result of scientific chemistry. A copy of the pamphlet will be sent to any Canadian physician requesting the same.

**An Important Decision.**—Ichthyol Trademark.—The Federal Tribunal of Lausanne, Switzerland, recently gave its decision in an appeal against the decision of the Court of Appeal of Berne in the action brought by the Ichthyol Co., Hamburg, proprietors of the trademark "Ichthyol," marketed in the United States by Merck and Co., of New York, to prohibit Luedy & Co., Burgdorf, from infringing the trademark. The Lausanne Court rejected the defendants' appeal and confirmed the former judgment, which ordered that the defendant firm should no longer use for their products names containing in any way the characteristic word "Ichthyol." It was proved that the trademark "Ichthyol" is the legitimate property of the Ichthyol Co., and that only this company is able to supply the sulphur preparation known under the name "Ichthyol." The defendants had pretended to supply the same preparation as supplied by the Ichthyol Co., but the court stated that their product differed essentially in composition from the genuine article.—*Chemist and Druggist*.

**Queen Alexandra's Statue.**—The first statue of Queen Alexandra on English soil will be erected in the grounds of the London Hospital, to commemorate the completion of the rebuilding operations, which have cost £45,000. The sculptor will be George Wade, and the statue, which will be of bronze, will be of heroic size. It will cost £1,500, and of this sum £1,300 has been subscribed already by the committee, the staff, and a few personal friends.

**The Canadian Association for the Prevention of Consumption.**—The sixth annual meeting of the Canadian Association for the Prevention of Consumption and Other Forms of Tuberculosis will be held in the Railway Committee-room of the House of Commons on the 28th inst. The Hon. Senator Edwards will preside in the afternoon. In the evening a public lecture will be delivered in the Lecture Hall of the Normal School, by Dr. Arthur J. Richer, of Montreal, which will be illustrated with stereopticon plates, showing the stages of consumption, and some of the appliances now in use to check and cure the disease. The chair will be taken in the evening by His Excellency Earl Grey.

**The New Asylum for Epileptics at Woodstock.**—The Asylum for Epileptics at Woodstock, a new Provincial institution, has been completed, and on January 19th was formally handed over by the contractor to the Provincial Secretary's Department. It consists of two cottages, capable of accommodating seventy patients, and an administration building. Dr. Williams, of Lisle, is the superintendent. Mr. E. R. Rogers, Inspector of Asylums, and Mr. F. R. Heakes, the Government's architect, will inspect the building at once, and as soon thereafter as possible it will be officially declared opened with fitting ceremony. This is Ontario's first public institution for the care of epileptics.

**Special January Issue of the Interstate Medical Journal.**—The publishers of the *Interstate Medical Journal*, St. Louis, Mo., are to be congratulated upon their special January number. It is undoubtedly a credit to any medical publishing house. It is made up of well over two hundred pages of text, the sections covered being internal medicine, surgery, diagnosis, pathology and bacteriology, obstetrics and gynecology, pediatrics, orthopedics, neurology and psychiatry, laryngology and otology, dermatology and syphilis and ophthalmology. The one issue is itself a volume, and there is not a page in the issue that is not replete with scientific matter. Congratulations to our friend, Dr. O. F. Ball, the Managing Editor.

**New Department of Physics Toronto University.**—Plans have been prepared for a new building for the department of physics, in connection with the Toronto University. It is expected that building operations will commence early in the spring. The total cost is estimated at \$225,000. The project for the University Men's residences will take tangible shape during 1906. It is intended to erect four houses, each containing accommodation for fifty, at a cost of \$50,000 each. A site has been selected on the corner of Hoskin Avenue and Devonshire Place, and plans are now being prepared. In connection with the department of botany it is proposed to erect plant houses, costing approximately \$10,000. The probable site is on the east side of the ravine north of Hoskin Avenue. To provide space for the display of the collections in the departments of mineralogy and geology, President Loudon says a wing will probably be added within the year to the new Chemistry and Mining Building on College Street. In addition there is also the new General Hospital building in view for next year. The site has not yet been selected, but will undoubtedly be in the neighborhood of the Medical College so as to make clinical instruction convenient for the students.

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**Uric Acid Tophæ Treated with Magnesium Perhydrol.**—Magnesium perhydrol is a new preparation, consisting of 15 per cent. magnesium peroxide, which is recommended in the treatment of gout and other forms of the uric-acid diathesis. Jaeger has found it of service in the treatment of uric-acid tophæ, and has used it in the following prescription: Magnesium perhydrol (Merek), 100 (3 1-4 oz.); sacchar. lact., ad, 500 (1 lb.). One teaspoonful in milk three times daily.—*Arztl. Mittheilung.*, 1905, No. 36.

**Action of Lecithin on Leucocytes.**—Ladislaus Detre and J. Sellet announce that, after subcutaneous injections of lecithin containing serums into animals, a large proportion of these are rendered immune towards mercuric chloride. Post-mortem examination showed at the points of injection yellowish-white butyry masses which, in addition to concentric layers of lecithin, were mainly composed of leucocytes charged with globules of that substance to an extraordinary extent. Their appearance was not otherwise abnormal, and the authors think that by taking up lecithin in this manner the leucocytes acquire an exceptional degree of activity.—*Brit. and Colon. Drugg.*, xlviii, p. 258).

# *The Physician's Library.*

## BOOK REVIEWS.

*Anatomy, Descriptive and Surgical.* By HENRY GRAY, F.R.S., Fellow of the Royal College of Surgeons; Lecturer on Anatomy at St. George's Hospital Medical School, London. Edited by T. Pickering Pick, F.R.C.S., Consulting Surgeon to St. George's Hospital, and to the Victoria Hospital for Children, London; H.M. Inspector of Anatomy in England and Wales, and Robert Howden, M.A., M.B., C.M., Professor of Anatomy in the University of Durham and Edinburgh, and to the Board of Education, South Kensington. New American edition. Thoroughly revised and re-edited, with additions by John Chalmers Da Costa, M.D., Professor of Principles of Surgery and Professor of Clinical Surgery in Jefferson Medical College, Philadelphia; Surgeon to the Philadelphia Hospital; Consulting Surgeon to St. Joseph's Hospital. Illustrated with 1,132 elaborate engravings. Philadelphia and New York: Lea Bros. & Co. 1905.

Dr. J. Chalmers Da Costa has brought out a new American edition of Gray's Anatomy. It gives one quite a shock to see a new, up-to-date Gray's Anatomy of 1,600 pages, brought out by Lea Bros. & Co. in 1905, when the second American edition of the same work, published by Blanchard & Lea in 1862, contained only 816 pages. Eliminations there may have been, but the changes and additions are so considerable, that the original work is barely recognizable in the new one. For instance, in the edition of 1862, the description of the Female Organs of Generation occupies 11½ pages, with 6 illustrations; in the edition of 1905 the same organs are described in 33½ pages, with 29 illustrations (both books being quartos). The illustrations form a prominent feature in the new edition. They number 1,132, and of these about 500 are new. Many of the old illustrations are recognizable, though improved by the addition of colors to designate arteries, veins and nerves.

The Latin nomenclature has been introduced in parentheses, following the names still used in English-speaking countries. This reform should be appreciated by writers for the medical press. If writers employing the English, German or other

language were to use the Latin nomenclature, in mentioning or describing organs, there would be no doubt as to their exact meaning. Although the pronunciation of Latin, as used by different nations, differs very much, written Latin is the same for all, and, in anatomy at least, should pass current among all physicians.

Special articles on histology and embryology do not appear in the new edition. With such a thorough revision, Gray's Anatomy should maintain its place for another generation at least.

J. J. C.

*The Physiology and Therapeutics of the Harrogate Waters, Baths and Climate Applied to the Treatment of Chronic Disease.* By WILLIAM BAIN, M.D. (Durh.), M.R.C.P. (Lond.), and WILFRID EDGECOMBE, M.D. (Lond.), F.R.C.S. (Lond.). London, New York, and Bombay: Longmans, Green & Co., 39 Paternoster Row, London. 1905. Price, 7s. 6d. net.

This book is divided into four sections and comprises in all about three hundred pages. Section one deals with the pharmacology and therapeutics of the natural mineral waters; section two with the subject of baths; section three, climate, and four, the treatment of chronic disease. The volume is, of course, interesting, as showing the therapeutic value of the Harrogate waters and baths, as against depending too much on treatment by drugs. The authors have given only facts supported by clinical experience, and can therefore be depended on. The subject is dealt with in a most methodical manner, the general principles involved being first taken up, followed by the physiological action, and lastly the therapeutic application.

W. A. Y.

*The Eye: Its Refraction and Diseases.* By EDWARD E. GIBBONS, M.D., Assistant Surgeon of the Presbyterian Eye, Ear and Throat Hospital; Demonstrator and Chief of Clinic of Eye and Ear Diseases in the University of Maryland, Baltimore. Vol. II. New York: The Macmillan Co. Toronto: Morang & Co. 1905. \$5.00 net.

One has a favorable impression from the first opening of the book, for in type, paper and form it is a radical and pleasing departure from the usual medical text-book. In the arrangement of its matter there is just as striking a change, for the embryology and the anatomy of the eye and its appendages are dealt with separately instead of forming a preliminary to the study of the diseases of the individual parts. These sections are liberally illustrated, the most striking of the plates being taken from Testut's "Anatomy"—a work which our publishers might well have translated. In addition to the usual chapters on the diseases of the eye, there is one on ophthalmic migraine, and another on associated

diseases of the eye and ear. The illustrations of ophthalmoscopic conditions are far from being satisfactory; their coloring bears but the slightest resemblance to what is actually seen, but this is a defect common to nearly all works on the subject. J. M.

*Progressive Medicine.* A Quarterly Digest of Advances, Discoveries and Improvements in the Medical and Surgical Sciences. Edited by HOBART AMORY HARE, M.D., assisted by H. R. M. LANDIS, M.D. December 1, 1905. Philadelphia and New York: Lea Brothers & Co. Six dollars per annum.

The December number is filled, as usual, with interesting discussions of recent medical literature. The first section deals with diseases of the digestive tract, including the liver, pancreas, and the peritoneum.

The second section is devoted to genitourinary diseases. Under "The Surgical Treatment of Nephritis" occurs the statement: "It is now evident that the anatomical changes commonly understood by the term chronic nephritis—those changes caused by toxins circulating in the blood and derived from the tissues—are not susceptible to improvement by nephrotomy or decapsulation.

In the section on general surgery the discussion on anesthetics is exceedingly interesting. While ether is thought to be the safest, yet no one anesthetic is considered suitable for all cases. The anesthetic must be selected for each individual case. Many writers report satisfactory experience from using the ether-drop method on a small, open chloroform mask, for administering ether.

The final section is given to practical therapeutics. It contains a full discussion of the various kinds of serum used in the treatment, or for the prevention, of disease. A. E.

*Food in Health and Disease.* By ROBERT F. WILLIAMS, M.A., M.D., Professor of Principles and Practice of Medicine in the Medical College of Virginia, Richmond.

Messrs. Lea Brothers & Co. have pleasure in announcing for publication early this month a completely new work on dietetics adapted to the use of practitioners and students of medicine, nurses and the laity.

The volume will be a convenient 12mo of about 350 pages. Its price has not yet been fixed, but it will probably be about \$2.00, net, delivered to any address.

It is divided, for convenience, into two parts: Part I. dealing with food in health, and Part II. with food in disease.

In Part I. the needs of the body for different kinds of foods and the manner in which they are utilized are explained. The principles of cooking foods and detailed descriptions of the different articles of food in common use are given, with chapters



on the proper nutriment of infants, children, adults, and the aged.

Part II. deals with the variations from the normal diet in health, necessitated by the more common diseases, and includes a chapter on general methods to be observed in feeding the sick, as well as the special directions for nourishment in diseases of different kinds.

There exists to-day a need for a small, practical book on foods and how they should be used, which will give the facts, as known to-day, in a brief and clear manner, with the fewest possible technical terms.

The importance of a work of this kind, which is simple enough for a child to read and yet absolutely trustworthy and based upon the scientific achievements of accepted leading authorities, is obvious. Such books are in line with the best principles of hygiene and make for the betterment of the present as well as future generations.

*A Manual of Diseases of Infants and Children.* By JOHN RUHRAH, M.D., Clinical Professor of Diseases of Children, College of Physicians and Surgeons, Baltimore. 12mo volume of 404 pages, fully illustrated. Philadelphia and London: W. B. Saunders & Company. Canadian agents: J. A. Carveth & Co., 434 Yonge Street, Toronto. 1905. Flexible leather, \$2.00 net.

Dr. Ruhrah's manual may be best described as being well written and altogether a practical and useful little volume. The section that most attracted our attention was that devoted to infant feeding, a subject which so frequently proves almost a stumbling-block to the busy practitioner. Dr. Ruhrah throws out lots of hints as to feeding which should prove of material assistance to his readers. The author also gives quite a number of prescriptions which he has found of greatest benefit in practice. The illustrations are capital and some inserts included in the book exceedingly useful for reference.

W. A. Y.

*Surgical Diagnosis.* A Manual for Students and Practitioners. By ALBERT A. BERG, M.D., Adjunct Attending Surgeon to the Mount Sinai Hospital, New York. Illustrated with 215 engravings and 21 plates. New York and Philadelphia: Lea Bros. & Co. 1905.

This work is the most clear, modern and concise book which the reviewer has read upon the subject of surgical diagnosis. The author has availed himself very fully of the added light and knowledge regarding the early stages of disease-processes afforded by laparotomy, exploratory incision, radiography and bacter-

iology. Supported by the knowledge thus obtained and by the assurance begotten of aseptic methods, the surgeon exposes to view every organ and cavity of the body. Hence there arises need for close analysis and new classifications of clinical evidence. The work, while an excellent one for students because of its conciseness, lacks the fulness and fineness of distinction which the surgeon wants when he has occasion to consult a work of this kind. While in the main the language is perspicacious, and strictly scientific terms are employed having a correct significance attached to them, yet there are some exceptions. The term "chronic synovitis" is several times employed as if a definite disease were thereby denoted. As well might one employ the word "dropsy," meaning thereby a definite, pathological entity. A diagnosis has not been made until the underlying cause has been determined. The illustrations are clear, numerous, well-chosen and very helpful. The mechanical make-up is excellent.

B. E. M.

*International Clinics.* A Quarterly of Illustrated Clinical Lectures and Especially Prepared Original Articles on Treatment, Medicine, Surgery, Neurology, Pediatrics, Obstetrics, Gynecology, Orthopedics, Pathology, Dermatology, Ophthalmology, Otology, Rhinology, Laryngology, Hygiene, and other topics of interest to students and practitioners. By leading members of the medical profession. Edited by A. O. J. KELLY, A.M., M.D., Philadelphia, U.S.A., with the collaboration of Wm. Osler, M.D., Oxford; John H. Musser, M.D., Philadelphia; James Stewart, M.D., Montreal; J. B. Murphy, M.D., Chicago; A. McPhedran, M.D., Toronto; Thos. M. Rotch, M.D., Boston; John G. Clark, M.D., Philadelphia; John J. Walsh, M.D., New York; J. W. Ballantyne, M.D., Edinburgh; John Harold, M.D., London; Edmund Landolt, M.D., Paris; Richard Kretz, M.D., Vienna. With regular correspondents in Montreal, London, Paris, Berlin, Vienna, Leipzig, Brussels and Carlsbad. Volume III. Fifteenth Series. Philadelphia and London: J. B. Lippincott Co. 1905. Canadian agent: Chas. Roberts, Montreal.

We are glad to find the name of Professor McPhedran, of Toronto, as one of the contributors to Volume III. of this series of "Clinics." Our collaborator contributes a most able article of about six pages in length on "Mucous Colic, or Membranous Colitis." Mr. Sym, of Edinburgh, devotes a chapter on "Gonorrhoea and Conjunctivitis," which is of unusual merit, but unfortunately too short. Our friend, Dr. T. D. Crothers, of Hartford, Conn., contributes ten pages or more to the discussion of "Injuries and Lesions Following the Toxic Use of Alcohol," and no one,

perhaps, in this country is better able to deal with that subject than is the editor of *The Journal of Inebriety*. Volume III. is fully the equal of its predecessors.

W. A. Y.

*Animal Heroes.* ERNEST THOMPSON SETON. Toronto: Morang & Co., Limited. Cloth, illustrated, \$2.00.

Decidedly a gift book for a boy, written in short sketches in the author's happiest vein. The stories are illustrated with hoppers, crawlers and queer 'uns of all kinds, wild and tame. Sometimes the illustrator just throws on the page a fragment, sometimes completeness had an innings, and then a real "society" dude appears dressed for a party. Get the book for the boy, and surely through the stillness of night a voice will call from dream-land: "Daddy, I've seen things, please get me a drink." However, the game is worth the candle.

*The Gambler.* By KATHERINE CECIL THURSTON. Toronto: Fleming H. Revell Company.

A well-written story of the life of a lovely girl; intensely interesting, with its bright bits of description of life in London and on the continent at the pace it is now lived. The interest never flags and a large circulation of the book is as assured as it is merited.

W. A. Y.

*A Manual of Physiology, with Practical Exercises.* By G. N. STEWART, M.A., D.Sc., M.D., Edin., D.P.H., Camb., Professor of Physiology in the University of Chicago, with colored plates and nearly four hundred other illustrations. Fifth Edition. London: Baillière, Tindall & Cox, 8 Henrietta Street, Covent Garden. 1906. Canadian agents: J. A. Carveth & Co., 434 Yonge Street, Toronto.

The most prominent feature of this work is the combination of practical exercises suitable for the laboratory, with the ordinary descriptive text matter usually found in text-books. This method has many advantages for students, and it has been in a large measure responsible for the great popularity of this book. In some respects this method is of value to practitioners in reviewing separate chapters or subjects, as it gives a more practical and comprehensive idea without the necessity of consulting a special work on practical exercises.

The present edition has been completely revised, and in many parts rewritten. New matter has been added, especially in the chapters on the Blood, Digestion and the Central Nervous System. The illustrations are abundant, and are quite satisfactory in every respect.

A. E.

*The Signs of Internal Disease*, with a Brief Consideration of the Principal Symptoms Thereof. By PEARCE KINTZING, B.Sc., M.D., Professor of Physical Diagnosis and Diseases of the Heart, Maryland Medical College; Physician to the Franklin Square Hospital, Baltimore, Md. Illustrated. Chicago: Cleveland Press. 1906.

It has been contended that the science of physical diagnosis cannot be learned from books. The personal method of instruction is doubtless the better one; but, as the author says, "The orderly setting forth of the ground work and a clear description of the phenomena on which are based the inferences and conclusions of physical diagnosis, are as necessary and helpful to the students as is the same work in any other department of science."

As all cannot take advantage of direct clinical teaching, a well-written book is a good second choice, and, when the voice of the teacher is stilled, what he has written remains.

Dr. Kintzing has covered the ground work well, has written of it well, and has made a judicious use of illustrations to strengthen his descriptions.

From a typographical standpoint the book is a creditable production. It deserves a large sale. J. J. C.

*International Clinics*. A quarterly of illustrated clinical lectures and especially prepared original articles on Treatment, Medicine, Surgery, Neurology, Pediatrics, Obstetrics, Gynecology, Orthopedics, Pathology, Dermatology, Ophthalmology, Otology, Rhinology, Laryngology, Hygiene, and other topics of interest to students and practitioners by leading members of the medical profession throughout the world. Edited by A. O. J. KELLY, A.M., M.D., Philadelphia, U.S.A., with the collaboration of Wm. Osler, M.D., Oxford; John H. Musser, M.D., Philadelphia; Jas. Stewart, M.D., Montreal; J. B. Murphy, Chicago; A. McPhedran, M.D., Toronto; Thos. M. Rotch, M.D., Boston; John G. Clark, M.D., Philadelphia; Jas. G. Walsh, M.D., New York; J. W. Ballantyne, M.D., Edinburgh; John Harold, M.D., London; Edmund Landolt, M.D., Paris; Richard Kretz, M.D., Vienna, with regular correspondents in Montreal, London, Paris, Berlin, Vienna, Leipsic, Brussels and Carlsbad. Vol. IV. Fifteenth Series. 1906. Philadelphia and London: J. B. Lippincott Co. 1906.

The first point of excellence in this, the closing, volume of the Fifteenth Series of *International Clinics* is the beautifully executed colored plate opposite the title pages, illustrating "Localized Psoriasis." It is as fine a piece of color printing as we have seen in some time. The first lecture in the book is one by Dr. W.

S. Gottheil, of New York, on "The Treatment of Psoriasis," with illustrations. It is very practical, and is illustrated with four half-tone plates, showing general psoriasis, the circinate, annular and stellate forms, and psoriasis of the scrotum. Sir Dyce Duckworth contributes an excellent lecture on "The Later Stages of Cirrhosis of the Liver," and Dr. J. B. Deaver one, under Surgery, entitled "The Results of Operations, such as Gastroenterostomy, Pyloroplasty, etc., in the Treatment of Diseases of the Stomach."

W. A. Y.

*Nervous and Mental Diseases.* By ARCHIBALD CHURCH, M.D., Professor of Nervous and Mental Diseases and Medical Jurisprudence in Northwestern University Medical School, Chicago; and FREDERICK PETERSON, M.D., President of the State Commission in Lunacy, New York; Clinical Professor of Neurology and Psychiatry, Columbia University. Fifth edition, revised and enlarged. Octavo volume of 937 pages, with 341 illustrations. Philadelphia and London: W. B. Saunders & Company, 1905. Canadian agents: J. A. Carveth & Co., Limited, 434 Yonge St., Toronto. Cloth, \$5.00 net; half-morocco, \$6.00 net.

"Church and Peterson," as this now authentic work has come to be named, has met with a well deserved measure of success. It has already exhausted four separate editions, and again appears thoroughly revised and in somewhat new form. It is looked upon by many to-day as a most representative and authoritative work on nervous and mental diseases, and it deserves its reputation as such. The authors have from the first kept before them the necessity of making their volume accord with, as nearly as possible, all of the most recent advances in Psychiatry. New chapters on the Krapelin Classification of Insanity, Manic-Depressive Insanity and Dementia Præcox have been added with quite a number of new illustrations.

*Ambulance Examination Questions.* Being a Catechism on Warwick & Tunstall's First-Aid to the Injured and Sick. By D. M. MACDONALD, M.B., Surgeon-Lieut., 2nd Scottish Horse. Bristol: John Wright & Co. London: Simpkin, Marshall, Hamilton, Kent & Co., Ltd. 1905. Pp. 30. Price, 6d., net.

This unpretentious little pamphlet is designed to be a companion to Warwick & Tunstall's well-known book, and is more especially adapted to advanced first-aid pupils, assisting them to review their lectures and practical work and grasp the fundamental ideas of instruction in first-aid. To such it may be found useful.

C. R. D.

*Text-Book of Anatomy.* Edited by D. J. CUNNINGHAM, F.R.S., M.D. (Edin. and Dublin), D.Sc., LL.D. (Glasgow and St. Andrew's), D.C.L. (Oxon.), Professor of Anatomy, University of Edinburgh. Second and thoroughly revised edition. Illustrated with 936 wood engravings from original drawings, many printed in colors. New York: Wm. Wood & Co. 1905.

This book is dedicated by the editor "To Sir William Turner, K.C.B., in recognition of his eminence as an Anatomist and his influence as a Teacher." Dr. Cunningham's volume in its first edition received quite a warm reception, and now, three years after its publication, the author has had to almost rewrite it. Comparing the second edition with the first, it is readily seen that it has been very carefully revised. Quite a large number of illustrations have been added. The sections which have been most largely changed are those on the brain and nervous systems, the muscles, the lymphatics, the joints, and the genito-urinary system. Cunningham's "Anatomy" will soon be looked upon (if, indeed, it is not now) as one of the standard text-books on that subject.

*Atlas and Epitome of Diseases of the Skin.* By DR. FRANZ MEXACEK. Philadelphia and London: W. B. Saunders & Co. Canadian agents: J. A. Carveth & Co., Ltd., 434 Yonge Street, Toronto.

The author deals with the various diseases in a concise and clear manner, which will be fully appreciated by students and the general practitioner. The illustrations are exceedingly fine, and would be of great service in reading any work on dermatology.

D. K. S.

*A Text-Book of Physiology.* For Medical Students and Physicians. By WILLIAM H. HOWELL, Ph.D., M.D., LL.D., Professor of Physiology, Johns Hopkins University, Baltimore. Octavo volume of 905 pages, fully illustrated. Philadelphia and London: W. B. Saunders & Company. 1905. Cloth, \$4.00 net; half morocco, \$5.00 net. Canadian agents: J. A. Carveth & Co., Limited, 434 Yonge Street, Toronto.

Everyone specially interested in physiology would expect a good book from Professor Howell, and I am sure no one will be disappointed who reads this one. The style is clear and simple. Facts are briefly stated, and theories carefully explained.

Physiology and the kindred sciences, chemistry and physics, are making rapid strides, and new literature on these subjects is abundant. The author states that the selection of what to give and what to omit is a difficult problem. He says there does not seem to be any sound reason why a text-book for medical students should aim to present only those conclusions that have crystallized

out of the controversies of other times, and ignore entirely the live issues of the day, which are of so much interest and importance, not only to physiology, but to all branches of medicine. With this idea in mind the author has endeavored to make the reader realize that physiology is a growing subject, continually widening its knowledge, and readjusting its theories.

This is one of the best books available on this subject, and we have pleasure in recommending it as a thoroughly complete and reliable text-book for medical students, and an accurate, up-to-date, and highly practical book of reference for practicing physicians.

A. E.

*Anatomy and Physiology for Nurses.* By LEROY LEWIS, M.D., Surgeon to and Lecturer on Anatomy and Physiology for Nurses at the Lewis Hospital, Bay City, Michigan. 12mo of 312 pages, with 100 illustrations. Philadelphia and London: W. B. Saunders & Company. Toronto: J. A. Carveth & Co., Ltd. 1905. Cloth, \$1.75 net.

This is an excellent text-book, containing a simple and comprehensive statement of the essentials of anatomy and physiology for the use of nurses. The descriptions are clear and accurate, the subject-matter well arranged, and the illustrations good. A special feature is the review questions at the end of each section. The press work is admirable.

H. M.M.

*Practical Massage in Twenty Lessons.* By HARTVIG NISSEN, Instructor and Lecturer in Massage and Gymnastics at Harvard University Summer School; Director of Physical Training, Brookline Public Schools; Former Acting Director of Physical Training, Boston Public Schools; Former Instructor of Physical Training at Johns Hopkins University and Wellesley College; Former Director of the Swedish Health Institute, Washington, D.C., etc., etc.; author of "Swedish Movement and Massage Treatment," "A, B, C of Swedish Educational Gymnastics," "Rational Home Gymnastics," etc. With 46 original illustrations. 168 pages. 12mo. Philadelphia: F. A. Davis Company, publishers., 1914-16 Cherry Street. Price, extra cloth, \$1.00 net.

Many books are written on the authority of others, and are often compilations by a comparatively young and inexperienced author. "Practical Massage" has the merit of being written by a man with thirty years' experience as a masseur and teacher, and is, in fact, the result of his life's work. In twenty lessons the author gives much that is original in combination with the best and most useful "manipulations" and "movements" of other systems. Massage is based on plain physiological and anatomical

laws, and must not be confounded, as is too often the case, with "magnetism," "regular gymnastics," or "rubbing."

As a practical help in the treatment of the sick, this little book should find a place in the library of the physician, nurse, and masseur.

E. H. A.

*Carbonic Acid in Medicine.* By ACHILLES ROSE, M.D. New York and London: Funk & Wagnalls Co. 1905.

The use of carbonic acid gas for therapeutical purposes can be traced back many centuries. In modern times it has been employed by only a few persons, and its value in therapeutics is not generally understood. This work is an effort to describe the value and the mode of application of carbonic acid gas in medical practice.

The opening chapters deal with the physiology and chemistry of respiration, and the history of the use of carbonic acid gas in therapeutics. A description is given of its healing effects in such conditions as asthma, whooping-cough, dysentery, rectal fistula, chronic suppurative otitis and rhinitis. Many interesting cases are cited to show its value in these and in other diseased conditions.

The author appears to have succeeded in relieving or curing many of his cases. His success should encourage others to make a practical test of his methods.

*Ayesha, The Return of She.* By H. RIDER HAGGARD, author of "She," etc. Toronto: William Briggs. 1905.

This is Rider Haggard's latest production, and is indeed worthy of so noted a pen. It is a soul-stirring narrative of the adventures of two Englishmen in Thibet and the unexplored lands north of that country. They are in quest of a spiritual reality, an immortal named "She," "Ayesha," "Star that Hath Fallen," variously. Their quest is successful, and they find the object of their toil and love. It is a book which holds the reader's attention from cover to cover, and is of intense interest, especially to one who has read its forerunner "She." It is gotten up in very attractive form with several illustrations.

W. J. W.

#### BOOKS, PAMPHLETS, ETC., RECEIVED.

We have to hand Wellcome's Medical Diary and Visiting List for 1906. We can heartily congratulate Messrs. Burroughs Wellcome & Co., of London, Sydney, Cape Town and Milan on presenting such a complete and essential little book, full of pointers and useful information for the medical practitioner.

W. H. P.



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## *Original Contributions.*

### IMMIGRATION IN RELATION TO THE PUBLIC HEALTH.\*

BY P. H. BRYCE, M.D.,  
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*Mr. President and Gentlemen of the Association,*—When we consider that 1,000,000 immigrants were added during the last year to the 70,000,000 people of the United States, and that 150,000 were added to the 6,000,000 in Canada, or one person of foreign birth, education and ideas in every 70 in the one instance and one in every 40 in the other, it is apparent, when, as in the United States, 10,000,000 foreigners have been added to the population within twenty years and the rate of present increase in Canada is proportionately twice as great, that the words of Tennyson, in "Vastness," impel our attention:

"Spring and Summer and Autumn and Winter,  
And all these old revolutions of Earth:  
All new-old revolutions of Empire—change  
Of the tide—what is all of it worth?"

If we are not prepared, as we are not, to answer this *cui bono* with another verse of the same poetic cry of whither drifting,

"Raving Politics never at rest as this poor Earth's pale history runs—  
What is it all but a trouble of ants in the gleam of a million million of  
suns?"

then it is plain that no good citizen of this continent can avoid the study of this the most serious of the political, social, economic and health problems of to-day. How shall we approach it? Shall

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\*Prepared for American Public Health Association Meeting.

we at once say, especially in the United States: "Raise an absolute Chinese wall and exclude all foreigners until the people have had time to digest this, to some, hydra-headed monster, like the serpent, which slimy glided up from the dark depths of ocean and crushed on Trojan shores Laocoon and his glorious sons"? Shall we, finding past efforts useless in stemming the tide of immigration which brought over a million alien people to American shores last year, give up the fight and open our gates wide, if not welcoming, at least permitting the good, indifferent and bad to enter and submit to the conditions which their intrusion has produced and must continue to create? Or shall we adopt the third possible position of recognizing the situation as we find it and deal with the problem in the same successful manner as national, state and municipal authorities have dealt with the contagions which everywhere, in former years and to-day, follow the march of commerce and transportation, whether by sea or land?

Remembering all the forces, political, commercial and social, which are ever and continually at work, the rapidly vanishing elements of distance and time, and the equally increasing approximation of the nations of the world and all human interests, it is apparent to everyone who thinks at all deeply on the subject that the latter is the only possible position. Assume the possibility of exclusion, and we behold whole fleets disappearing from the ocean almost as suddenly as that ill-fated Russian squadron in the Sea of Japan. Recently a but little susceptible people showed their power to hit back by a wholly defensible boycott, and railway magnates and other generals of commerce cry out against laws which this nation has made, and sea-board cities, which once cried "Exclude!" are now quaking as if a foreign enemy were threatening their commerce. Without further illustration, it must be apparent that the only possible position is to regulate.

Never before in the history of the world, unless when Attila's hordes poured down upon a helpless Europe, have more than a million people been transferred in a single year from one continent to another, and of all the marvels perhaps the greatest is that these have come from countries the most separated in distance, nationality, language and civilization, without the transmission of scarcely a case of any of those diseases which cause epidemics. At any rate, we can say, if such cases came, so quickly and thoroughly were they dealt with that no epidemics have resulted therefrom. We have only to compare this with the melancholy and repeated stories of the first seventy-five years of the last century, when immigration had not reached a quarter of its present proportion, in order that the members of this Association may justly take pride to themselves and say, "*Quorum sum magna pars.*" This Association, starting as it did in those

now distant early days, thought then only of smallpox, cholera, typhus and yellow fever; now, with such problems solved, it naturally, and indeed is forced, to turn and deal with other problems created in the hundreds of civic centres, the outgrowth of a hundred years of immigration. Just as society has become more complex, so have its public health problems become more difficult. To England these have been present and pressing for fifty years; to the cities of this continent they are the outgrowth of twenty-five. Yet England has never had the problem of our great cities. During the past twenty years the immigration of foreigners to England has averaged probably 100,000 annually, but probably not more than half that remained. Thus an old, well-organized society of 40,000,000 has had to absorb but 50,000 annually, whereas this continent must digest over one million. Yet we learn what there happens daily, that a shipload of continental immigrants has only to arrive at a London dock, be met by their fellows, and in ten minutes they are gone and indistinguishable from the hundreds of thousands of the same foreign-speaking people already there. A foreign city is within the greater city, and it is not absorbed. Yet these people are in a sense absorbed, for they have come under police, health and social surroundings which have reduced the London death rate to 17 per 1,000. It is apparent, then, that in an old city, with its machinery gradually and adequately evolved, it is possible to handle these crude masses of humanity with comparative success. Reverting to our own problems, it is apparent that they are enormously greater than those of England. I am not familiar with the various state and civic sanitary codes in the United States, but know fairly accurately what they are in Canada. Now judging the former by the latter, I venture to say that the housing problem is as yet of all civic problems the least dealt with as, indeed, it is the one most difficult to approach. It may be quite true that public health officers have hitherto on this continent been chiefly engaged in removing cases of disease from tenements; but I venture to anticipate that this Association, and all similar ones, if true to their mission, will, within the next twenty-five years find their chief occupation in improving if not removing the tenements themselves. We have in New York, Boston, and Chicago tenement house commissioners, and their annual reports indicate the extent and nature of the task; but in Canada and in, I imagine, most United States cities, whatever is done with overcrowded and insanitary houses is done under some clause in the sanitary code.

Hitherto there have been two phases of the problem: first, What ought to be done? and the second, How are we to get it done? Everyone knows how the problem arises. The houses of a generation ago or half that in New York or Montreal, of the

residential sections, were adequate for their then purpose. Population, railways, extension of trade in a dozen directions within a few years have changed locally the whole face of things. The store-keeper prospers and moves up town; the houses on the street become a store or a tenement. Let a city's increase be 10,000, or, as in some cases 100,000, a year, and these changes become almost magical. It is now not a question alone of what is to be done, but how is it to be done? Rents rise, there is actually a famine in houses; even those persons of a fair income are forced to combine in many instances their housing, both from necessity and from expense. To say that such conditions are taken advantage of by the house-owner and house-agent is but to say what under the law of supply and demand is natural and logical. To understand that the unscrupulous will conspire and organize to intensify these conditions is what, under the prevailing ideas of competition being the life of trade, is only to be expected. What the usurer, the agent of the usurer, and what even so-called philanthropists and religious corporations have permitted and may still be permitting, in this exploiting of the poor has been, since the days of the Chartists, the subject of seathing criticism and censure alike by poets, novelists and writers of every sort, and yet the evils continue, and very few are seriously expecting any amelioration of the conditions. A recent newspaper article, dealing with certain scandals in which the politicians were involved, said, whether it was with regard to trusts or insurance companies, that the people got about the kind of political representatives and legislation that they wished for or were worthy of. The statement may be true in a sense, but such can in no way remove from those who have a sense of responsibility the duty of exercising it wherever and whenever it becomes possible in relation to society. Naturally, such applies to us as members of this Association, no matter to what section of public health work we apply ourselves. As federal officers, in control of the inspection of immigrants, it is apparent that the responsibilities are enormous. Shipping companies, booking agencies, employers of contract labor, organized schemes for assisting immigrants and others for preying upon them, whether in transit or after landing on our shores, are all playing their parts in inducing immigrants to seek this Western Eldorado. Senor Mosso, in a recent article on Italian emigration, has stated that there were at one time more than ten thousand agents in Italy actively promoting emigration from that country. To these agencies must be added the yet far larger and more effective influence of the immigrant, who, having arrived, encourages and aids his relatives and friends to come to him. To oppose, therefore, to some extent the evil results which naturally arise from these multiplied influences, the United States Government has for

years been enlarging the efficiency of her civil and medical immigration services, which in 1903-4 debarred 6,440 persons from landing in the United States out of a total of 941,315 aliens arriving at her ports, and deported 479 who had gained admission to the country within three years after landing. Under similar laws and action the immigration service of Canada during the same year deported 270 out of a total of 99,741 arriving at ocean ports and 85 others subsequent to their admission to Canada.

But it is apparent that the more than 1,000,000 admitted to the two countries during this year, thousands of whom had not as much as ten dollars on landing, must either have been directed in their movements or have drifted into those very cities and those districts of our cities where the tenements exist and where the police, social and sanitary problems persistently call for our attention. To-day the immigration services of both countries are first asking themselves how they can prevent, if it be possible, the embarkation of more of those who through poverty, criminal instinct, or disease, must be deemed undesirable immigrants, and second, how they can distribute such immigrants as are given permission to land. To the Canadian Government, according to a recent United States authority, must be given the credit for the first serious attempt at distributing immigrants, after entrance to the country, through its having officers accompanying all parties from the sea-port to their destination in the very centre of the new territories, where free-land grants are, and to which they are even conducted by Government agents. But this, it is felt, is still dealing but imperfectly with the problem which includes the thousands who annually drift to the great cities. In the United States this problem overwhelms the officers of the service. When, as stated in a recent paper by Dr. Allan McLaughlin, of the Marine Hospital Service, over 65,000 Jewish immigrants located in New York in one year, it is apparent that the problem extends far beyond that of inspection at the ports of entry, and that it must include some system of internal jurisdiction and supervision originating in and remaining a part of the Acts relating to immigration. But with such a system in existence the problem would be still unsolved, since its factors essentially lie still within state and municipal powers and jurisdiction.

Dr. McLaughlin very aptly remarks: "The responsibility for the slum can be divided between money-grasping property-owners and an indifferent puerile administration. The immigrant finds the tenement and slums already established when he arrives, and is the victim and not the cause of them." In what direction, then, must we look yet further? Primarily, of course to our state and provincial governments. Upon them falls largely the cost of police and justice, to them the charge of institutions for

the insane and feeble-minded belongs, and from them the municipalities obtain at least a part of the cost for the care of paupers and incurables. It is not without reason that our state legislatures demand relief from some of the burdens incident to this enormous immigration. For instance, the State of New York had, in 1904, 7,983 aliens or 20 per cent. in the whole 39,127 inmates of public, insane and charitable institutions in a population of 7,268,894, while the percentage of such to the total of aliens was even greater in Massachusetts. In Canada similar figures have not yet been collected, but the burden in such centres as Montreal and Winnipeg has begun to be seriously felt. To the legislatures of such states, therefore, must we look for first an appreciation of what the situation demands, and thereafter for legislation requisite to limit these growing evils. It may be said that immigration primarily depends upon favorable industrial conditions, and that so long as such continue this influx will go on unceasingly.\* This may be true, but it is also true that under favorable industrial conditions regulations especially dealing with the overcrowding of dwellings and tenements and their sanitary improvements can most readily be brought into operation.

In what direction, then, can such legislation be begun? In the Bill for the regulation of alien immigration, introduced in 1904 and passed in 1905 by the British Parliament, a provision exists whereby the Local Government Board can by order limit the number of any particular nationality or class within a certain specified urban district of any city in the United Kingdom. Here we have a general provision which any state legislature could enact, and one capable of wide application since it brings the state into immediate and necessary relations with the municipal authorities. What is the simple meaning of such provision? Just this, that any slum district occupied by a foreign colony would either be altogether prevented or at least limited in extent. What further could be done? A general enactment could be passed having a model by-law attached requiring that no cellar can be occupied as a dwelling, that tenements may be entered at all hours by special sanitary officers in order that the number of inmates may be known and that the lease-holder and landlord may be subject to a fine adequate to prevent overcrowding. Should we admit that such laws would be still insufficient yet another resource is possible, which would be to have assessments levied rather upon the revenues accruing from overcrowded tenements than from the value of land and buildings. The facts relating to the rent primarily received by the owner of the property, to the percentage received in addition thereto by his agent and to the amount

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\* For instance immigration to the United States decreased from 560,319 in 1891 to 250,342 in the lean year of 1895.

extorted as key-money by the collector under the system of weekly rentals, have been made the subject of too many enquiries to longer doubt their truth. Is anything more yet possible? The power ought undoubtedly to exist, as it does in some health laws, whereby sanitary officers could have rent withheld and applied directly to the construction of necessary conveniences, and if further neglected that the lease might be broken.

So much and more might be placed in a general sanitary code of the state with powers enabling municipal councils to add special clauses dealing with particular matters.

Such legislation having been passed, are we then to expect the problem to be solved? To some slight extent yes, perhaps, but only partially. The very intricacy of the problem, dealing as it necessarily must with the question of right, on the one hand, of an individual to live in 200 cubic feet instead of 1,000 of air space, and to work for 25 cents or 50 cents for sixteen hours a day if so disposed, and of the landlord to make such a condition possible for him, and, on the other hand, of the authorities to interfere with such presumably natural rights, cannot but make it appear evident that before success can be obtained some ethical standard of being and doing must be recognized which will be sufficient to prevent the grinding of the faces of the poor. Where shall we find it? Amongst the leaders of labor? Without questioning the value of labor organizations, I have yet to recall any more serious attempts on their part than those of increasing wages and shortening the working hours. But if they have not called loudly for sanitary reforms, as Frederick Harrison advised them twenty years ago in England, if they have not been the most advanced in advocating temperance in the drinking customs of the people, can we say, though suffering most, that they have been different in this from the wealthier classes?

“Our aspirations, our soul’s genuine life,  
Grow torpid in the din of earthly strife.”—*Faust*.

Are we to expect that landlords, speaking generally, for there are good landlords, will be the first to move or that the employers of cheap labor will encourage conditions which would at once force up the wages to a living point, when yearly thousands upon thousands of new hands come to their doors asking only the privilege of working?

I know a Canadian city in which there is not a single by-law which prevents either residence in a cellar or the overcrowding of tenements by tier over tier of bunks, and another in which the city council refused to ask, and the provincial legislature, when urged by the health officer, neglected to provide a law to prevent residence in cellars, though an epidemic of smallpox was present.

Surely of such the words of the Master are true, "Ye are yet in your sins." In what direction are we to look for assistance? I sometimes wonder, when I have seen in the daily newspaper the sports page, which used to be a column, now spreading over to the second page, and the report of an important Board of Health meeting, once a month, reduced to half a column, how the Saviour's words, "What went you out for to see? A reed shaken in the wind?" would be applied by these daily providers of public palatium, who find their defence in supplying, as they say, what the public demand. Have they not, with their large opportunities, yet larger responsibilities, as educators of public opinion, to investigate conditions and to educate our people to first desire and then obtain such legislative and municipal reforms as will lessen what, now bad, will become intolerable if allowed to go on unchecked. In the meantime we may very properly gird on our sanitary armor for yet more serious struggles. We have to oppose the agents of crime, of acute disease, of tuberculosis and its allied congeners of degeneration, of insanity, and of the multiplied neuroses the outcome of malnutrition, bad food, exhaustion, foul air, and dissipation. As we have dealt with the old-time pestilences which slew their thousands, so must we deal with the more secret, insidious, yet more far-reaching and fatal foes of urban life, where populations, once rural, have multiplied, since the era of the steamship, railway, and electricity, into cities, not once but twenty fold! The problem has been rapidly forced upon this continent. Allured by the golden prospects of material development we have not had time to realize or have forgotten, "That the life is more than meat and the body more than raiment." And yet the victories of the past are pleasant auguries for the future. New diseases demand new remedies, and new conditions will be met by new resources. We may comfort ourselves somewhat, perhaps, with the words of Rabbi Ben Ezra:

"Grow old along with me!  
The best is yet to be  
The last of life for which the first  
was made;  
Our times are in his hand  
Who saith, 'A whole I planned:  
Youth shows but half; trust God: see all  
nor be afraid.'"  
—*Browning.*



## Selected Articles.

### DYSPEPSIA CONSIDERED AS A BRAIN DISEASE—A HISTORICAL CONTRIBUTION TO THE NEUROPATHIC SIDE OF THIS SUBJECT.\*

BY CHARLES H. HUGHES, M.D., ST. LOUIS,  
Dean of the Faculty and Professor of Neurology and Psychiatry, Barnes University.

IN 1832 Amariah Brigham, a distinguished American physician, in a little book on the "Influences of Mental Cultivation and Mental Excitement upon Health," wrote as follows:

"Dyspepsia is generally considered a disease of the stomach primarily. But I apprehend that in a majority of cases, especially among students, it is primarily a disease of the brain and nervous system, and is perpetuated by mental excitement. This I emphasize as my text."

Among his reasons for so believing were the following:

First—A blow or other injury of the head, or a tumor on the brain, frequently produces sickness, irritation of the stomach, and all the symptoms of dyspepsia.

Second—Mental affections. And here he relates of himself as follows: One day when about to sit down to dinner, with an appetite whetted by five or six hours' exercise, a letter was put into my hands announcing the death of a friend to whom I felt strongly attached. The consequence was an instantaneous loss of appetite which continued for two or three days; and here he quotes Dr. Parry, an authority of his day, as concurring with him, and asks who has not felt the influence of bad news or mental agitation in destroying appetite.

Third—Insanity, or disease of the brain, is usually preceded by the symptoms of dyspepsia, and recovery from mental derangement is often marked by a return of these symptoms.

Brigham combats the then prevalent views of Broussais and says that from his cases it evidently appears that slight irritation of the brain from mental or other causes gives rise to derangement of the stomach and produces the ordinary symptoms of dyspepsia. He turns Broussais' cases of melancholia from nostalgia and unrequited love, mortified pride and loss of fortune against this dis-

\*Read before the Section of Nervous and Mental Diseases, American Medical Association, Portland, Oregon, July 12, 1905.

tinguished author, and says it is not the violent reaction from dyspepsia, as Broussais asserts, that produces the mental depression, but the mental depression that produces the dyspepsia.

The morbid influence though primarily proceeding from the brain to the stomach, is doubtless mutually reacting.

Abernethy's peculiar and extravagant notion of the vast influence of the stomach in the animal economy is also combated by Brigham, who was keen enough to detect a flaw in the great Scotch surgeon's reasoning when he says, "there is no hurt of the head that does not affect the digestive organs."

The relationship of the head in so-called sick headache is here noted by our author, who very much doubts whether sick headache as often arises from disturbed stomach as from an irritated brain, having repeatedly noticed an attack of sick headache prevented by keeping the head cool after an evening's debauch. His explanation of the sickness and disorder of the stomach of the debauchee, the *katzenjammer*, is as follows:

"The increased action of the blood vessels during sleep, produced by the stimulating food or liquor, determines an unusual quantity of blood to the brain, irritates it, and this irritation of the brain produces the pain in the head, sickness and disorder of the stomach."

In his fourth reason, Brigham refers to the fact that on "examination of bodies of those who have died after long-continued dyspeptic symptoms," the lesion was found in the head and not in the stomach, and quotes from Amblerombie on "Organic Diseases of the Brain," a standard then and even now not without authority, that "symptoms which really depend on disease of the brain are very apt to be referred to the stomach," and refers to several of Amblerombie's cases in which for a long time the prominent symptoms were those of dyspepsia though no trace of organic disease of the stomach was discovered after death, but tumors or other diseases of the brain, and quotes Abernethy's important caution to the careful diagnostician and clinician as follows:

"In cases of this class, we must beware of being misled, in regard to the nature of the complaint, by observing that the symptoms in the stomach are alleviated by attention to regimen or by treatment directed to the stomach itself. If digestion be impeded from whatever cause, these symptoms in the stomach may be alleviated by great attention to diet, but no inference can be drawn from this source, in regard to the nature of the derangement."

Note now that it is the great Amblerombie that is speaking. Referring to this our author justly comments as follows:

"This last quotation, I think, explains a very common mistake, a mistake which is not only made by dyspeptics themselves, but by writers on this disease. They suppose because low diet, etc.,

relieves the principal symptoms in the stomach that, therefore, the disease is principally confined to that organ, when in fact the disease is in the head, but is manifested only by the stomach, liver or some organ with which the brain sympathizes, and the low diet (and in our day, the pepsins, papoids and other digestives) gives relief. The atonically enfeebled stomach is relieved by lessening its labor, of course, either limiting its digestive labor or by performing it artificially, but to bring back its tone we must restore its innervation, even where ulceration or other impairment of its villi or its peptogenic glands exist."

The rest cure for the nervous dyspeptic was first propounded by Dr. Brigham in these words: "No one rule, relating to the cure of disease, is more important than that which teaches to let a diseased organ rest."

Dr. Robert Maenish, author of the *Philosophy of Sleep, Anatomy of Drunkenness*, etc., who wrote the preface in 1836 to the Glasgow edition of this remarkable book, adds an argument as follows:

"The relief which many dyspeptic people obtain by going to watering places, is a sufficient proof their complaint is often intimately connected with the state of the brain. Oppressed at home with the cares of business, or rendered nervously irritable by dissipation, vapid pleasures or want of occupation (for this is as pernicious to the brain as too much employment), a state of hypochondria, accompanied by impaired digestion ensues. In this state they fly to such places as Bath, Leamington or Cheltenham; place themselves in the hands of some fashionable empiric who very gravely tells them to drink the waters, restrict themselves to a particular diet and take some trilling medicine which he prescribes for them. They do this, coupling it with exercise in the open air, and with light amusements which generally abound in such quarters. The consequence is that the brain gets into a healthier state of action. If its morbid condition was produced by too much thinking, this is relieved; if by too little, this is obviated also, materials for employing it sufficiently existing in the change of scene and in the prevailing gossip of the place. Restored to comparative health by this change of scene, the patient returns home in raptures at the virtue of the waters, and the wonderful skill of the doctor under whom he was placed."

Dr. Brigham also quotes from Dr. Hastings, of England, who, in 1831, noted that many of the nervous symptoms of which dyspeptic persons complain, are produced by slow alteration of the membranes of the brain is consequence of chronic inflammation.

Hastings had already noted the increased determination of blood to the head, alternate flushings, coldness, irregular spirits of dyspeptics, and in the fatal cases had found the morbid appearance in the brain just mentioned.

Bayle, Burrows and M. Barras are quoted by Brigham as sustaining his position in spite of their preconceived views to the contrary. M. J. P. T. Barras, *Traite sur les Gastralgies et les Enteralgies, et Maladies Nerveuses de l'Estomach et des Intestins*, considered dyspepsia a servous disease, but only of the nerves of the stomach. The cases of Barras are examined by Brigham and found to be mostly mental, "they had experienced severe mental affliction, had been melancholy, been afflicted with great mental suffering, or had studied severely or been exposed to constant turmoils. When such cases terminated fatally, no marks of disease were found in the stomach; but effusion or other signs of disease were observed in the brain."

This case is quoted from Burrows:

"A lady, who had been unwell for several years, referred all her suffering to the stomach, and often said that when she was dead, *there* would be found the seat of the disorder. She died rather suddenly with fever and delirium, after exposure in a very hot day; and on examining the body no trace of disease appeared in the stomach or bowels, but the brain exhibited marks of *long-standing disease*."

Brigham's fifth argument is as follows:

"The fact that dyspepsia is frequently cured by permitting the over-taxed and tired brain to rest, or by changing the mental labor or excitement, is evidence that it is primarily a disease of the head, and not of the stomach. How often do physicians fail to afford any relief by medicines, in what are called 'stomach affections,' but which are readily cured by traveling, or relaxation in accustomed studies, and freedom from care and anxiety. How often a change of the mental excitement affords relief. It seems as if certain portions of the brain, having been unduly excited, became diseased, and were benefited by strong excitement of other portions of the same organ. How often are *stomach* affections cured by inert medicines, aided by the imagination, confidence, hope, etc.

"What is but the influence of the mind that gives efficacy to remedies that are secret, which they do not possess when known?"

Macnish relates the cure of a lady who for some months fancied herself very ill of a stomach complaint, by administering three dozen bread pills.

The influence of hypnotism, then called mesmerism, and its record in the cure of stomach and other diseases, is referred to by our author as an evidence of the influence of mind over bodily ailments.

As a sixth proof, Brigham notes the fact that dyspepsia is a disease chiefly confined to the studious, whose minds are much exercised and excited, and to those who, by too early mental education, have had a prominence given to the nervous system, and

instances among historic proofs the melancholic and passion-devoured Tarquato Tasso, who at the age of twenty-two had written the finest epic poem of modern times, and the hypochondriacal delusion-pursued Pascal, whose literary celebrity and death were so bad and premature.

He answers the argument that sedentary life causes dyspepsia by conceding that exercise improves the circulation of the body and determines blood from the head, which is more necessary in students than in others. Tailors, shoemakers, etc., he says, are not particularly liable to dyspepsia.

The great Abernethy, who advised a dyspeptic British nobleman to live on a shilling a day and earn it, learned the object lesson on which the advice was based from a class of non-dyspeptic English workmen who, in his time, lived below the level of great ambition and social striving, whose vegetative life of rhythmical labor and rest was a daily recurring routine without brain-strain, fret and worry. But the nobleman would not improve from following such advice unless the labor should be congenial and the mind satisfied, though physical labor tends to divert blood from the brain.

Abernethy seems to have put the cart before the horse in his conception that complicated maladies of the human race are due to "gormandizing, stuffing and stimulating" the digestive organs to excess, "thereby producing nervous disorders and irritations," for excessive feeding, where the brain is not goaded to irritability, tends in man as in the animal, to produce drowsiness and sleep by diverting blood from the brain, followed by recuperation and renewed power where sleep is sufficiently prolonged. I doubt if one would greatly overfeed, if it were not for an irritated brain and nervous system wasting and crying out for repair beyond the natural power of the stomach to respond. In the normal unirritated state of the organism, appetite, waste and repair are correlative. Young children, like the animals in a state of nature, do not ordinarily have dyspepsia.

Nervous disorders and irritations, as Brigham thinks, make the gormandizers. But even Abernethy conceded that the state of the patient's mind was a great cause of dyspepsia, as well as other diseases. "Fidgeting and discontenting yourselves about what cannot be helped; passions of all kinds—malignant passion, pressing upon the mind, disturb the cerebral action and do much harm," and apropos to the question of mental influence, we all know that history records how the celebrated John Hunter, a contemporary of Abernethy, fell and died from an apoplectic stroke brought on by a fit of violent passion.

Dr. Macnish, already quoted, is again referred to by Dr. Brigham as follows:

"It is a great error to study immediately after eating. In

such a case the nervous energy required for the process of digestion instead of being expended upon the stomach, is wasted upon the intellectual organs. The almost inevitable result is dyspepsia; and it will be found that those who are in the habit of strongly employing the mental faculties shortly after food, are more or less subject to this affection."

Unless the mind works tranquilly and does its daily work without undue fret and worry and within the physiological limitations imposed upon it by its organs, it will prove to its landlord (the brain) as even Plutarch observed, a ruinous tenant. It will pull down the temple and destroy its props—its gastric, hepatic, cardiac, renal and other supports. While this is true, the contrary is likewise truth, viz., that regular mental occupation alternating with proper recreation, rest and accompanied with adequate nutrition, tranquility and a reasonable and temperate play of the emotions and passions, tends to promote health and prolong life, as the history of the world's great thinkers from Hippocrates, Harvey, Jenner and Cullen in our ranks, to Newton, Herschel and Galileo, Hippocrates having the greatest longevity (109 years) of all.

Though dyspepsia is yet generally considered and treated as a disease of the stomach primarily, as in the time of Amariah Brigham, I now reaffirm, as this distinguished practitioner did so much in advance of his colleagues sixty years ago, that in the majority of cases, especially among students, it is primarily a disease of the brain and nervous system, and is engendered and perpetuated by over mental strain and mental worry and excitement, and its cure is brought about through mental rest, recuperation, diversion, the rebuilding and restoration of the tired and damaged centers of the cerebral cortex and of the medulla and fourth ventricle, through a judicious neurotherapy reinforced by mental relaxation, agreeable diversion, congenial companionship, pleasing travel and all environing conditions of good physical and mental health.

Here is an instructive biographical record that Brigham made of cases he had observed, and it is as true as truth itself:

"Some have travelled far, and have recovered; voyages have restored others. Some have become husbands and forgotten their stomach complaints; some have succeeded in business and are well; some are in or out of office, and thus their minds are freed from long-continued anxiety; while others remain as they were several years since, having just discovered, for the twentieth time, some new, and, as they believe, effectual remedy for their indigestion; but which will assuredly disappoint them, if they do not cease from mental toil, and for a while let the excited brain be quiet."

But we do better with our dyspeptics now, or we have resources

for arresting and delaying brain waste and promoting rest and restoration of exhausted nerve force. But nothing supplements agreeable and invigorating change of air and scenery and congenial diversions for promoting or completing recovery from dyspepsia, when the tired, nervous system is put in recuperative state by the chemical restrainers of nerve irritability and promoters of tranquillity, when at the same time the brain and mind are made quiescent and willing to receive the benefits of rest, diversion, etc. This is best done by the very agent which has contributed and is contributing as much as any other to break the brains and nervous systems of the people—electricity, the cerebral tranquilizing power of constant galvanism. What the dynamo, the telephone and the phonograph have contributed to undo, this agency helps to repair again, and modern medicine, which has given us dynamite and its train of social and political agitation has given us agencies which “knit up the ravelled sleeve of care” and “minister to minds diseased,” hypnotics that soothe psychic pain and quell riots in psychic centers.

These the physician may use to prevent cerebral waste, pending construction and the reaccumulation by other suitable treatment of that exhausted nerve force upon which dyspepsia, or at least nervous dyspepsia, depends. I will not deny that it may have a purely local origin in the stomach, but such origin is comparatively infrequent. It is possible to cause dyspepsia by local causes, as by a few swallows of concentrated lye or other corrosives, and certain foods and drinks, the excessive use of alcohol, etc., but this latter, as well as tobacco, more often damages through depressing the nervous system than otherwise. But if we examine the lower animals, we find that the most ravenous and omnivorous never have this disease in their wild and free state. Hogs are not dyspeptic, nor are the domestic animals, unless they become trick animals and are over-trained. Hunting dogs become dyspeptic when taken from the chase and confined and fretted in close quarters. I have known an old dog to become dyspeptic from jealousy of attentions bestowed upon a younger dog. When a domestic animal is satisfied with its life and environment, it does not become dyspeptic. Human beings are likewise free from this disease under similar circumstances, and as to over-feeding being the determining cause of dyspepsia in the otherwise healthy, though it undoubtedly may cause attacks in the predisposed, we have only to consider for refutation the condition of those people who habitually eat enormously, as the Siberians, who eat from twenty to fifty pounds in one day, and the Esquimaux, who will eat ten or twelve pounds of solid food and a half gallon to a gallon of whale oil in a day, eat and digest tallow candles wick and all, as Brigham records. While there is a limit to the

stomach's capacity, that limit is determined largely by the general health, and the general health gives tone to and depends on the tone of the nervous system.—*Alienist and Neurologist*.

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## ON THE SERUM TREATMENT OF HAY FEVER.\*

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BY DR. A. LUBBERT AND DR. C. PRAUSNITZ.

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IN the course of the past year, Dunbar published in the *Berliner Klinische Wochenschrift*, 1903 (Nos. 24, 25, 26, 28), the results of his studies, so far as they were then advanced, on the etiology and therapeutics of hay-fever. At the same time he promised to give a later report of the practical experiences obtained with his specific serum.

Those researches left the question still open, as to whether the cause of hay-fever, as it occurs in the whole civilized world, could be traced to one single exciting agent. Interest must still more centre in this question since the successful treatment by antitoxic serum depends on the universality of the cause. Meanwhile Dunbar's pollen toxine has been tested, in regard to its effect on hay-fever patients, in practically all civilized lands.

Everywhere the same results were obtained: in different parts of Germany, in Denmark, England, Scotland, as also in the United States of North America—whether in northern districts, as in New York, Baltimore, St. Paul, Miami, and St. Louis, or in more southerly parts, as, for instance, in New Orleans—the results were the same. Everywhere hay-fever patients showed a specific susceptibility to the toxine, whereas control-persons, with only a few exceptions, such as had been already observed and described by Dunbar, were entirely insusceptible to the toxine.

Confirmatory observations have already been published by Thost, Semon, McBride and E. Mayer.

From the results obtained by these test-experiments, the extremely important conclusions from the point of view of therapeutics can be drawn, viz., that hay-fever, wherever it occurs in the different civilized countries, is an affection having one single etiological factor, so far as concerns the exciting agent, and leaving out of account the cause of the individual predisposition. It may be assumed that there are different reasons for this predisposition. The universality of the exciting cause is, however, demonstrated by the fact that the symptom complex of hay-fever, wherever the disease may be found in the world, is excited in the predisposed exclusively through the pollen of certain plants, and

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\* Extract from a paper in *Berliner Klinische Wochenschrift*, 1904 No. 11 u. 12.



more especially through the toxine obtained by Dunbar from them. Only in the case of autumnal catarrh, a disease closely allied to hay-fever, which occurs in the United States of North America, is there this difference, viz., that it is excited not by the pollen of grasses, but by the pollen of *Solidago*, *Ambrosia* and perhaps of other late flowering plants. These patients do not suffer at the time when the grasses are in flower, but in autumn. The relationship of autumnal catarrh to hay-fever is shown by the fact that the disease is favorably influenced by the antitoxine derived from pollen of the Graminaceae.

How great, moreover, this varying individual susceptibility to the hay-fever poison can be, may be judged, since it has been shown by recent researches that the application of so small a quantity as 1-40000 mgm. of the highly potent rye-pollen toxine to the conjunctival sac of a hay-fever patient is sufficient to excite an irritation of several hours' duration. This quantity of toxine is contained in two or three rye-pollen grains.

Liefmann, whose work will shortly appear, has shown that in the hay-fever period the number of pollen grains contained in the air is more than sufficient to excite hay-fever attacks. On days when the attacks are severer in character, he found, in confirmation of Blackley's results, that much more pollen was in the air than on days when patients had less to suffer. Considering the extraordinary susceptibility of many hay-fever patients, one can only wonder, after Liefmann's results, that the appearances observed are not much more severe. It is possible that the body gets rid, through the sneezing fits and the excessive secretion, of much of the inhaled pollen before it can exercise its effect.

Dunbar, in the publication mentioned, already indicated that his efforts to obtain a practically useful hay-fever antitoxic serum has been successful earlier than he had hoped possible. This serum has, according to the communications up to the present received, been tested on 285 patients, distributed over most civilized countries. The success of the treatment was with 171 patients or 60 per cent. of the cases complete, with 83, or 29 per cent., partial, while only 31, or 11 per cent., experienced no benefit.\* The antitoxine is produced by the well-known firm, Schimmel & Co., in Miltitz, near Leipzig, and is obtainable from chemists under the name "Pollantin."

Particular care has been taken to ensure a constant antitoxic value in the serum, and it will be sent out in such a condition that it can under no circumstances be harmful. In order to guarantee the perfect harmlessness of the preparation, the horses used for obtaining the serum are under the control and supervision of a veterinary surgeon. Blood is withdrawn under all

\* Most of the unsuccessful results reported can be set down to incorrect use of the remedy.

aseptic precautions, at the earliest six to eight days after the horses have recovered and regained their former weight from the previous injection of toxine. The serum obtained is tested for sterility, and receives 1-4 per cent. phenol as preservative. After making certain by these precautions that a sterile preparation could be sent out, the next question concerned the mode of application. The method of subcutaneous injection, the usual one with other sera, is for the present not applicable in the treatment of hay-fever, because even after the injection of small amounts, which only afford a temporary and very limited immunity, unpleasant complications (itching, erythema, and swelling) appear at the site of injection. It can not yet be decided, whether later we may be able to recommend subcutaneous use of the serum. Since by external application, the simplest method, much more favorable and more lasting results have been obtained than were at first expected, there is in the great majority of cases no reason for subcutaneous injection of the serum.

In the directions for use it is pointed out that it is not possible by using Pollantin on a single occasion, to exclude for ever the possibility of further attacks of hay-fever, that it is therefore not to be regarded as a means of cure, but that it is on the other hand of extreme use in improving or altogether removing the symptoms of irritation, and that fortunately by an ever-repeated timely prophylactic use of the serum the appearance of attacks may be prevented. The serum's effect can as a rule only be reckoned on to last a few hours at the most, but, as is shown by a few case-histories, it has, even by external application, often conferred on patients a complete passive immunity of several days' duration.

With regard to prophylactic treatment, patients are advised under all circumstances to sleep during the hay-fever period with windows and doors shut. This important detail was unfortunately only taken to heart by a few. Our recommendation, to use the serum in the morning before rising, ere the mucous membranes of the eyes and nose come into contact with pollen toxine, appears to have been readily followed only by a small number of patients. Many patients always wait till severe attacks appear, before they use serum, although we had previously strictly warned against this practice, because in attacks the mucous membranes, especially that of the nose, are so altered that the local absorption of the serum must be greatly hindered. Therefore, as the remedy is easily absorbed by the normal mucous membrane and then, according to experience, exerts an after-effect of some hours, occasionally of some days' duration, every treatment which is not carried out systematically and prophylactically appears to us quite irrational. One can only wonder that so numerous satisfactory results were obtained, since the patients only in relatively few instances used

the serum thus prophylactically. It was found, unfortunately, that 1-4 per cent. carbolic acid did not suffice to preserve the liquid serum, after the bottles had been opened, for more than a few days, especially when it was carried in the pocket and, therefore, kept almost at body-temperature. The pipette introduced ever more and more micro-organisms from the nasal mucus into the serum. An increase in strength of the carbolic is not possible, owing to its setting up unpleasant irritation, and the addition of other preservatives had to be given up for other reasons, therefore it was recommended to pour into the accompanying small empty glass-tube, provided with a dropping pipette, only a small quantity of the serum at a time. In addition, this last serum-tube and the pipette with its rubber-top should be at once daily cleaned and boiled. In spite of these precautions the serum, owing to the method of its use as described, often decomposes within eight days. To be carefully distinguished from this decomposition, which is evidenced by turbidity and often by an unpleasant smell, is the deposit of a slight flaky precipitate, present when the sterile preparation is sent out. This is to be traced to the contained carbolic acid, and can be recognized by the fact that on shaking the serum a uniform turbidity is never produced. The usefulness of the preparation is in no way influenced by this carbolic precipitate, but of course a serum rendered uniformly turbid by bacterial growth must not be further used.

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### SUGGESTIONS REGARDING THE PREVENTION OF CONSUMPTION.

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THE following points and suggestions regarding the prevention of consumption which deserves the attention of everybody, are gathered from a recent article by Dr. Knopf, of New York, which is to be found in the *Medical Record* of November 18th, 1905.

There are more cases of advanced tuberculosis to be treated than any other disease.

There is no disease where so much can be done to render the patient comfortable and hopeful as pulmonary tuberculosis in the advanced stage.

There is no disease where one case in a family can more readily become the cause of infection of other members, particularly in the stage where the consumptive begins to be confined to the close association of the family members only.

It is extremely important to remember that advanced consumptive patients who are able to go about, perhaps able to work

at their ordinary calling in the office or factory, when ignorant or careless, constitute the greatest danger to the health of the community. They must be considered as the most frequent cause of infection. The careless, ignorant, or helpless consumptive, when confined to bed, can do little more than infect his room, but the advanced patient, able to follow some calling, can, if he is careless, scatter 7,000,000,000 bacilli every day with the greatest ease.

Of all tuberculous patients, he should be the most carefully instructed, and should be most deeply impressed with the fact that carelessness in the disposal of the sputum is dangerous to himself as well as to his neighbors.

As yet people generally have not been educated up to the point at which they are willing to carry and use a pocket-flask or cardboard purse. Being desirous to conceal their condition, they are extremely reluctant to do anything which would call attention to their infirmity. Some way less likely to cause remark must be found. Probably the best that can be done in the meantime is to suggest that tuberculous men should have two pockets lined with some material which can be easily cleaned, and that they should carry in one of these pockets very cheap handkerchiefs or bits of cheesecloth, or other cheap material cut like handkerchiefs, which when used can be put into the other pocket, and there kept until the close of the day, when they can be easily destroyed or sterilized by boiling after their return home. In this way they can escape observation, and at the same time secure their fellow-workmen and associates against danger. When so simple a precaution as this, and one so easily within the reach of every right-thinking man, is available, not to make use of it, would seem to be little less than criminal neglect.

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### IS THE PHYSICIAN EVER JUSTIFIED IN PUTTING AN END TO HUMAN LIFE ?

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IN the ancient fortress of the Old World city of Dampierre, France, there lies awaiting trial for the murder of his loved wife a man who in the course of a long life had won by his large, never-ceasing charity, his fine mental attainments, his exalted character, the love and respect of a whole province. He is Charles Candon, Mayor of Dampierre, and still the recognized head of the community. M. Candon killed the wife whom he adored because he could no longer bear to see her suffering the untold agonies of cancer.

"I obeyed the higher law of humanity," he says. "I loved

my wife. My wife was dying. They could not preserve her life. They were seemingly unable to do anything to relieve her from the tortures of which I was compelled to be a daily, hourly witness. She had entreated me to kill her and end her agonies. And at last I yielded and killed her with one blow of a hatchet. I do not in the least regret what I have done."

In his desperate act, born of intense emotion, M. Candon has set medico-legal scientists in Europe and this country awake with a problem of which no satisfactory solution has yet been found. The question thus raised is: "Can there be any conceivable combination of circumstances in which a physician would be justified in ending the life of a patient affected with a known incurable disease in order to end purposeless suffering?"

Prof. Felix Adler long ago laid down the general doctrine that such an act on the part of a physician under a given set of circumstances might be an act of mercy. And now, the case of Mme. Candon being cited to him, he answers: "While it would be impossible for me to give an absolute reply on a general question which requires thought, I may say that my views on this subject have not altered in the slightest degree."

Albert Bach, member of the New York bar, who years ago in a session of the Medico-Legal Congress raised this question and with it a storm that spread through England and America, is familiar with the case of Mme. Candon, and on it lays down this doctrine:

"In this case the woman was doomed to death; her agonies were intense; the doctors could not alleviate suffering, and her husband killed her. This is just one of the cases I have had in view. There are many able advocates of both the affirmative and negative sides."

"The matter admits of no discussion," said Dr. Morton. "I am necessarily familiar with the intense suffering caused by cancer. There can be no combination of circumstances that would justify a physician in ending the life of a patient. You cannot argue that the fatality of the disease justifies the act. For what human being dares to say that any disease is fatal?"

"If the doctrine laid down by Mr. Bach, by Prof. Adler and by other exponents of what is called the new school of thought is to be accepted," said Dr. Carleton Simon, "the whole basic principle of our profession would be destroyed. The one rock on which the practice of the healing art rests lies in these words: 'While there is life there is hope.' And we must fight for the preservation of a precious human life until the last spark has fled. Of course, I have had cases in which patients have entreated me to end their misery. But it is the duty of the doctor to be deaf to such appeals."—*Exchange*.

LINES TO A SKELETON.

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FIFTY years ago the London *Morning Chronicle* published a poem entitled "Lines to a Skeleton," which excited much attention. Every effort, even to the offering of a reward of fifty guineas, was vainly made to discover the author. All that ever transpired was that the poem, in a fair, clerkly hand, was found near a skeleton of remarkable beauty of form and color, in the museum of the Royal College of Surgeons, Lincoln's Inn, London, and that the Curator of the museum had sent them to Mr. Perry, editor and proprietor of the *Morning Chronicle*. We reprint it here:

- " Behold this ruin! 'Twas a skull  
Once of ethereal spirit full;  
This narrow cell was life's retreat,  
This space was thought's mysterious seat:  
What beauteous visions filled this spot  
With dreams of pleasure long forgot!  
Nor hope, nor joy, nor love, nor fear,  
Have left one trace of record here.
- " Beneath this mouldering canopy  
Once shone the bright and busy eye;  
But start not at the dismal void!  
If social love that eye employed—  
If with no lawless fire it gleamed,  
But through the dews of kindness beamed—  
That eye shall be forever bright,  
When sun and stars are sunk in night.
- " Within this hollow cavern hung  
The ready, swift, and tuneful tongue;  
If falsehood's honey it disdained,  
And when it could not praise was chained;  
If bold in virtue's cause it spoke,  
Yet gentle concord never broke;  
That silent tongue shall plead for thee,  
When time unveils eternity.
- " Say, did these fingers delve the mine,  
Or with its envied rubies shine?  
To hew the rock, or wear the gem,  
Can little now avail to them.  
But if the page of truth they sought,  
Or comfort to the mourner brought,  
These hands a richer meed shall claim  
Than all that wait on wealth or fame.

“ Avails it, whether bare or shod  
These feet the path of duty trod?  
If from the bowers of ease they fled,  
To seek affliction's humble shed;  
If grandeur's guilty bribe they spurned,  
And home to virtue's cot returned—  
These feet with angels' wings shall rise,  
And tread the palace of the skies.”

—*Montreal Star.*

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### **Skin and Genito-Urinary Affections Treated with Perhydrol.**

—W. Scholtz, working in the University Polyclinic for Skin Diseases at Königsberg, has been using perhydrol, a new preparation of hydrogen peroxide, in the treatment of skin diseases and in affections of the genito-urinary tract. For the past two years he has employed it with good results in the treatment of ulcerating and gangrenous processes of the skin, where its chief action is due to its antiseptic properties as well as to its ability as a cleansing agent. He has found a solution of 1:2 or 1:3 of perhydrol in water is the best solution for cleansing these gangrenous ulcers. If it is desired that a permanent dressing be placed over them then the solution used should be much weaker, 1:50 or 1:100. This weak solution is also advisable when applied to the nose, to the genitals, or to the anus. The author reports especially good results from the use of perhydrol in the treatment of mercurial stomatitis, particularly when the gums have become purulent or when ulceration has set in. In the treatment of this condition the patients should wash out the mouth hourly with a solution of 1:100, and once a day paint the gums with the pure material, using the simple cotton applicators. In simple stomatitis of the mouth it is also valuable. In torpid ulcers, buboes, or in the serpiginous forms of chaneroids, in leucoplakia, and in comedos and suppurating acne eruptions, he has also obtained excellent results. In psoriasis it has not proved of much value. In genito-urinary affections, the author has found it of service in the necrotic forms of cystitis, when in concentrations of 1:100 or 1:300 it can be safely used as a bladder wash, and is particularly effective in conjunction with a weak solution of silver nitrate. In solutions of 1:100 or 1:200, in combination with 1:1000 or 1:4000 silver nitrate, he has found that it is of excellent value in treating the terminal stages of acute gonorrhea, in chronic gonorrhea, and in all of the post-gonorrheal urethritides.—*Archiv für Dermatol. und Syph.*, lxxi., Nos. 2, 3.



# *School Hygiene.*



## SCHOOL CHILDREN AND TUBERCULOSIS.

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PROFESSOR GRANCHER, of Paris, and his pupils have found, as a result of their examinations in the Paris schools, that the proportion of children suffering from closed (or latent) tuberculous lesions of the glands and lungs is from 11 to 14 per cent. in boys and 17 to 20 per cent. in girls. At the International Tuberculosis Congress, recently held in Paris, Dr. Méry read a report on the "Prevention of Tuberculosis in Schools," in which the following measures were recommended:

1. Measures relating to hygiene of the class-rooms and furniture; ventilation, disinfection, prohibition of dry sweeping and of sweeping by the children, suppression of public meetings, prohibition from spitting on the school premises, etc.

2. Measures for the exclusion of such as are contagious, whether teachers or pupils; these should receive proper care.

As an indirect measure of prevention we should develop the antituberculosis teaching in school and the scholastic mutual aid associations.

The measures of individual protection, which should be applied to children suffering from tuberculous lesions, closed or latent, are as follows:

1. For children presenting mild lesions, and who remain at school; over-alimentation; distribution of powdered meat extract, of cod-liver oil, of iodo-tannic syrup; a course of respiratory exercises.

2. For children presenting more advanced lesions a stay in the country is necessary.

A passing stay of a few weeks in the country, such as that afforded by the holiday colonies or the school colonies, is absolutely insufficient. What is wanted is a permanent stay away from cities, either in the country, or in the mountains, or by the sea; or, again, open-air schools such as the one—an incomplete one, it is true—which has been founded at Charlottenburg.

This rural exodus, which has been so well realized for the predisposed by Professor Grancher in his work of family protection, should be insisted upon with as much if not with more energy for those who are already slightly attacked.



**Free School Meals at Manchester.**—The Manchester Guardians have approved of arrangements made with restaurants near the schools to supply dinners for school children needing them at 3d. each on five days of the week.

**Medical Inspection of Schools.**—This movement progresses steadily. Three physicians were appointed last October in Chelsea, Mass., by the school committee as medical inspectors for the public schools. This is the beginning of medical inspection of schools in Chelsea, and it was done in consequence of a report from the Superintendent of Schools, who believes it will greatly lessen the danger from the spread of contagious diseases, and have a good effect on the general health of the city. Another place moving in the same direction is the city of Bristol, England. Dr. Davies, Medical Officer of Health in Bristol, stated in his last annual report that there are 65,000 school children in the city, and that medical inspection is essential. Dr. Davies further suggests that if Bristol took action in this direction the citizens would save money in taxes.

H. MACM

# *Medicine.*

... IN CHARGE OF :  
J. J. CASSIDY, M.D., AND W. J. WILSON, M.D.

## A CASE OF PERIPHERAL NERVE SYPHILIS.\*

BY JULIUS GRINKER, M.D., CHICAGO.

Professor of Nervous and Mental Diseases, Chicago Postgraduate Medical School, Neurologist  
to Cook County Hospital.

THAT the peripheral nerves, both cranial and spinal, frequently become affected in the course of cerebro-spinal syphilis, is every-day experience. Disease of peripheral nerves or nerve-roots without co-existent syphilis of the central nervous system, is rather unusual. Of all cranial nerves the trigeminus is most often affected singly by the specific process. This may occur as part of a periostitic process in the foramina of exit: at the optic foramen, foramen ovale and foramen rotundum; or as a result of destructive process in the nucleus by hemorrhage, softening, sclerosis or tumor. Isolated disease of the trigeminus, however, is exceedingly rare. The rule is for other nerves to be involved along with the trigeminus in the following order: Optic facial, oculomotor, abducens, auditory, olfactory, trochlear. The facial, acousticus and motor nerves of the eye are frequently affected together and constitute part of a basal meningitis.

The clinical phenomena of peripheral nerve-syphilis manifest themselves either as neuralgia, polyneuritis, or root neuritis. Of the cranial nerves the trigeminus is usually the seat of isolated or simple neuralgia, which differs in no respect from ordinary trigeminus neuralgia from other causes. The same is true of the symptomatology of facial and auditory neuritis. It is evident that the diagnosis can not be made from the symptoms, but from the history of specific disease and the discovery of the stigmata of syphilis.

Nonne, in his book on "Syphilis of the Nervous System," best describes root neuritis in Kahler's words:

"In an individual, the subject of syphilis, or who has had syphilis, there appear, besides other cerebral symptoms, or without any brain symptoms, gradually progressive paralyses of various cranial nerves, which are recognized as peripheral, for instance, facial paralysis. One nerve after another is attacked

\* Presented before the Chicago Neurological Society, 1905.

in a most irregular succession. In the second place, there may appear gradually increasing neuralgias in various spinal nerves, with hyperesthesias, or girdle pains, as a consequence of posterior root involvement. Disease in the anterior roots will manifest themselves by corresponding motor paralysis of the peripheral type.

*Patient*.—A. Y., German, aged 40, single, a cook, entered the Cook County Hospital, March 17th, 1905.

*History*.—His family history is negative. He is a moderate smoker, never drank spirits and but little beer. He had several venereal sores about eight years ago; one of these was a hard chancre. This was followed by secondaries, such as sore-throats, alopecia, mucous patches and eruptions. About seven years ago he suffered from what he calls acute articular rheumatism. His joints were swollen and painful for three months, and the disease disabled him altogether for about six months. Last September he experienced severe pains in his left thigh which he considered rheumatic. After the application of some liniment he discovered that not only was his thigh smaller and weaker, but that his left eye was also turned inward and that he saw double. A two months' stay in the hospital brought about much improvement, and subsequent treatment at the Illinois Eye and Ear Infirmary completed the cure. The condition of the thigh, however, has remained unchanged.

He now comes to the hospital on account of severe pains in the entire right half of his face, which affect principally the right ear, but also involves the lower maxillary region. For a week he suffered constant pain, which even a tooth extraction failed to relieve.

*Examination*.—The patient is a small, poorly nourished man of middle age, who talks rather rapidly and stammers considerably. His face presents a typical peripheral facial paralysis. The wrinkles on the right half of his forehead have disappeared, the right eye does not wink, the right half of the face has lost all expression, the right corner of the mouth droops, while the left is drawn up high. When he attempts to wrinkle his brow the right half remains motionless. Nothing is only done with the left half of the nose, in speaking only the left half of the mouth functionates, and in an attempt to uncover the upper teeth, only the left side responds.

In an effort to close the eyes, Bell's phenomenon is elicited on the paralyzed half of the face, to wit: the affected lid fails to completely cover the eye-ball, and, instead, the latter turns upward and outward so as to hide the iris.

The pupils are equal and react well to light and in accommodation. While there is subjective pain in the region of the ear,

there is no tenderness over the mastoid, and objective sensory disturbances can not be elicited. No signs of external or middle ear disease can be found. There is no nerve-deafness. The tongue is protruded in a straight line. Taste is markedly impaired in the anterior two-thirds of the right half of the tongue. The post-cervical and inguinal glands are slightly enlarged.

The left thigh is considerably smaller than the right, and its strength is greatly reduced. There is tenderness at the point of exit of the sciatic nerve. When the sciatic is put on the stretch there is some pain. The thigh muscles on the left side are soft and flabby and present distinct atrophy.

On the middle third of the right leg there is an old scar of about the size of a half dollar, which has pigmented edges and a parchment-like centre, evidently the remains of a tertiary syphilitic. There is a distinct perforation of the soft palate, painless, and therefore unknown to the patient, probably syphilitic in origin. The grip in both hands is about equal and normal. Sensation is nowhere disturbed. The superficial reflexes are present everywhere. McCarthy's reflex is absent on the right side. The deep reflexes are normal in the upper extremities. Kneejerk is exaggerated on right side, and considerably reduced on the left side. The Achilles jerk is present bilaterally, but somewhat less marked on the left side. Gait is about normal. Co-ordination shows nothing abnormal. The eye-grounds are normal.

Large doses of mercurial inunctions and of potassium iodid up to twelve drams daily failed to produce any decided improvement during a course of treatment of two months' duration. The only change noted was a disappearance of the pain in the trigeminus region, which can not positively be attributed to the anti-syphilitic treatment. The patient has now left the hospital and treatment had to be discontinued.

*Summary.*—We find in this patient, with undoubted syphilitic antecedents and with the positive stigmata of syphilis, a right trigeminus neuralgia, a right-sided peripheral facial neuritis, neuritis of the left sciatic and left anterior crural nerves. These various nerve affections must be ascribed to syphilis, as we are unacquainted with any other single etiologic factor capable of producing such irregular nerve lesions.—*Jour. A. M. A.*

# Oral Surgery.

IN CHARGE OF  
E. H. ADAMS, M.D., D.D.S.

## FORTY-NINE CASES OF ARTIFICIAL DENTURES' SWALLOWED.

It is rather wonderful to notice nature's tolerance in some cases, and the apparent lack of sensation manifested by several patients who swallowed plates and retained them in the esophagus for a considerable time, several months in two cases, without the slightest suspicion that there was any particular trouble—only a sore throat. It is rather wonderful, too, that some of these plates, carrying from six to ten teeth, could have been swallowed at all, and when we notice that plates carrying five, six, and even seven teeth have passed entirely through the digestive tract without any injurious effects or much discomfort, it helps us to realize that we are really wonderfully made. It is also interesting to note that six cases were operated upon—three esophagotomies, two laryngotomies, and one tracheotomy, and all recovered. Several of these operations were performed nearly fifty years ago. Of a series of forty-nine plates swallowed, thirty-four were of metal, eight of vulcanite, and seven of material not mentioned. (These statistics were obtained from a complete file of the *Dental Cosmos*.)

The number of teeth on the various plates was as follows: One without any, five had one each, ten had two each, four had three each, six had four each, five had five each, three had six each, two had seven each, one had eight, one had nine, one had ten, and in ten the number of teeth was not mentioned. Many of them had clasps, which were probably the most dangerous parts, and were doubtless the cause of several of the deaths. I think it likely that most of these plates were of the "horse-shoe" variety, carrying one or more of the upper front teeth. This style of plate was a very common one, the custom among dentists for many years being to make either a full denture or a "horse-shoe" carrying "a set of four," or a "set of six" front teeth. This might account for the cases in which the plates remained in the esophagus so long without discomfort, the palatal portion of the plate fitting closely to the wall of the esophagus, and not offering much obstruction to the passage of food. The conditions under which the plates were swallowed were the following: Seventeen during sleep, ten during fits, mostly epileptic, one during puerperal con-

vulsions, seven while eating or drinking, one during a fall, thirteen conditions not mentioned. Of the forty-nine plates, nine lodged in the pharynx, twenty-seven in the esophagus, two in the trachea, and one in the stomach. Nine passed through the entire digestive tract without giving the patients any trouble, although several of these must have lodged somewhere in the stomach or intestines, as shown by the time occupied in passing through. One was not found, although the patient died and a post-mortem was held. Three of those lodging in the esophagus were pushed through into the stomach and passed on without difficulty, making a total of twelve that passed through the bowels. Of these three had two teeth, one had three, one had four, two had five, two had six, one had seven, and in two the number of teeth was not mentioned. One of the most interesting tabulations is that of the number of days occupied in the passage of these plates. One was two days, two were three days, one was five days, two were seven days, one was nine days, one was twelve days, one was one hundred and eleven days, and in three, time not mentioned. It is rather remarkable that the plate which was in the body one hundred and eleven days did not cause any serious trouble. We would think that there would have been an erosion of the tissues where it was lodged, or that it would have caused an obstruction. Of the nine plates lodged in the pharynx, one caused immediate death by lodging above the epiglottis and closing it. Another remained in the pharynx four and one-half months and was removed post-mortem, the patient dying of bronchitis. Five were removed through the mouth, by the finger or forceps, after remaining in the pharynx varying periods of from a few hours to five months. The plate that remained in for five months was a rubber piece carrying five teeth, swallowed during sleep. The patient had complained of sore throat, but never suspected having swallowed the plate. The other two were removed by pharyngotomy and recovered. A peculiar result of one of these operations was the changing of the patient's voice from tenor to bass, supposedly on account of the vocal cords being thickened afterward.

Of the twenty-seven plates of the series that became lodged in the esophagus, two caused ulceration of the aorta and death, one was pushed down the esophagus nearly to the stomach and remained there three months, when death intervened. Three were pushed into the stomach and passed through the bowels. One remained in the esophagus nineteen days, was pushed into the stomach, and was vomited ninety-seven days later, making a total of one hundred and sixteen days in the body. Five others were either vomited or coughed up, one of the patients dying eight days later as a result of inflammation. Another remained in the esophagus fifteen months and the patient, who had swallowed it

during a fit, never suspected it to be the cause of a sore throat during all these months. This plate was coughed up. Ten of this group were fished out *via* the mouth, having remained in from a few hours to three and one-half months. Three were removed by operation of esophagotomy, and all three patients recovered.

Of the two in the trachea, one caused death in a short time, the other was removed by operation and the patient recovered. The one mentioned as having lodged in the stomach was fished out with an esophageal coin catcher. One plate carrying two teeth was swallowed, and the patient died a week later. The plate could not be found post-mortem. There were ten fatalities out of the forty-nine cases, as follows: Four caused ulceration through wall of esophagus into aorta, pericardium, or lung. One died of bronchitis, one on account of closure of the glottis, one lodged in the trachea, causing asphyxia, one was found low in the esophagus, post-mortem, death having occurred in three months; one died of inflammation after having vomited the plate, and one died a week after swallowing a plate, but it could not be found post-mortem. Thirty-nine patients recovered; of these cases, twelve plates passed through the entire digestive tract, fifteen were fished out through the mouth, six were vomited or coughed up, and six were removed by operations through the neck.—Arthur D. Black, *Northwestern Dental Journal*

E. H. A.

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### A CASE OF HEREDITARY SYPHILIS OF THE MOUTH.

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THE author reports the case of a woman, aged thirty, who consulted him regarding an acute pain localized upon all of the upper incisors. The patient informed Dr. James that previous to the onset of the pain she had received a blow upon the upper jaw. Consequently, it was natural to presume, as did Dr. James, that the pain was the result of this traumatism. The gums were deeply inflamed and the upper right central incisor protruded slightly from the alveolus. An incision was made in the gum over this incisor and was followed by the discharge of a small amount of purulent matter. The area was explored through the opening thus made, when it was found that the hard tissue of the jaw was the seat of inflammatory phenomena. The lancing and removal of the pus did not result in any improvement whatever, but on the contrary, shortly after the intervention, the pain became almost unbearable. The maxilla necrosed, and as a consequence of this the author found it necessary to extract three of the upper incisors. Several sequestra were removed, but still conditions remained *in statu quo*. By this time the author began to suspect that the cycle of disturbances was due to syphilis,

and upon close questioning the mother and the obstetrician who had been in attendance at the child's birth, found that during the period of gestation she had suffered several times from grave syphilitic manifestations. In accordance with this almost positive diagnosis a specific treatment was instituted, and it was not long before the patient recovered entirely.—Dr. M. James, influential.—*Deutsche Monatschrift für Zahnheilkunde*, March, 1903.

E. H. A.

### PAPILLOMATA OF THE TONGUE.

THE author reports the case of a young girl, aged fourteen, who presented upon the dorsum of the tongue a strawberry-shaped tumor, flattened on the upper part and adhering to the tongue by a pedicle.

The tumor developed rapidly, having acquired that comparatively large size inside of four weeks after its first appearance. A diagnosis of epithelioma could not be established for the reason that this variety of tumor never develops upon the median line of the tongue, and, furthermore, because such objective symptoms as papillary swellings around the pedicle and indurated mucous membrane with white leucoplakia spots were entirely absent, and the tumor itself was neither friable nor did it have any tendency toward bleeding. It was not a syphilitic condyloma, as tumors of this variety never develop singly, and their appearance is always accompanied by a fissured condition of the tongue, mucous plaques, and without the silvery appearance of the tumor under consideration. The probability of the tumor being of a tuberculous nature was also entirely eliminated, as these usually develop upon an ulcerated base.

Having excluded the malignant tumors, the next step in the diagnostic study consisted in ascertaining to which variety of the benign group the tumor could belong. It was not a cyst, a lipoma, or a fibroma, tumors which evolve under the mucous membrane, but unquestionably a papilloma. In this connection the writer calls attention to the necessity of classifying papillomas not under the group of benign tumors, but under that of the malignant variety, as they not infrequently become eventually transformed into sarcomas and epitheliomas. The removal of a papilloma should imply something more than the ligating of the pedicle. The tissues at the base of the pedicle should be cut out, including part of the underlying muscular tissue, and the wound should be closed by means of sutures. Such operations may be performed under cocaine anesthesia.—Prof. Berger, of the Hôpital Necker, *Revue Trimestrielle Suisse d'Ontologie*, November 1st, 1905.

E. H. A.



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## Editorials.

### PATENT MEDICINES AND THE CANADIAN INLAND REVENUE DEPARTMENT.

THE Canadian Inland Revenue Department issued February 27th, 1906, a bulletin containing the results of analyses of patent medicines and headache powders. A matter of public interest is the report in the bulletin on the alcoholic content of patent medicines,

which have been and are extensively advertised in the newspapers and magazines of Canada. The analyses and the report thereon by the chief analyst at Ottawa are probably the first steps taken before such patent medicines are placed under the ban of the Canadian law. This would mean, that patent medicines, containing excessive amounts of alcohol, would be classed as alcoholics, and their wholesale and retail vendors required to pay special taxes thereon. The following patent medicines are mentioned in this bulletin as containing so small an amount, if any, of effective drugs or medicines, and so large an amount of alcohol, that their use as intoxicants is not uncommon: Atwood's La Grippe Specific, Cuban Gingerie, De Witt's Stomach Bitters, Dr. Bouvier's Buchu Gin, Rockandy Cough Cure, Duffy's Malt Whiskey, Gilbert's Rejuvenating Iron and Herb Juice, Hostetter's Stomach Bitters, Kudros, Peruna, Dr. Fowler's Meat and Malt. The only one of these preparations largely sold in Canada is Peruna.

In an editorial published in the January issue of *The Southern California Practitioner*, p. 33, it is stated that: "On November 25, 1905, the Commissioner of Internal Revenue, U.S., acting under the ruling of September 12, 1905, that certain patent medicines containing excessive amounts of alcohol should be classed as alcoholics and their wholesale and retail vendors required to pay special taxes thereon, declared, that the Department had carefully analyzed a number of such patent medicines and had placed under the ban of the law the following." Here follows a list of patent medicines precisely similar to that one reported in the Canadian bulletin to which we have just referred.

It also appears that the order of the United States Internal Revenue Department went into effect against the manufacturers of these remedies on January 1, 1906, and will go into effect against retail merchants of the same on April 1, 1906, these time extensions having been granted to allow those who purchased these remedies in quantities and in good faith to dispose of them. We are, therefore, quite justified in thinking that the Inland Revenue Department of Canada will imitate the action taken by the Internal Revenue Department of the United States in regard to the above-mentioned patent medicines.

We do not think, however, that the manufacturers of these patent life-savers will immediately go into liquidation. In fact,

it may be, that they will go on doing business as before—turning out medicinal alcohols for the benefit of an appreciative public. And a considerate white, black and yellow public in Canada will probably continue to buy these alcoholic preparations from retailers, at advanced prices; but the Canadian redman will have to try some other patent medicine.

Another matter referred to in this bulletin—headache powders—is deserving of note. Mr. A. McGill, assistant to the chief analyst at Ottawa, in presenting the results of the analyses of headache powders, says: “If there be any different degrees of toxicity in the use of these drugs, it remains for the medical fraternity to pass a verdict upon the matter. I may say, however, that the habitual use of any substance so potent in its physiological effects as acetanilid must be attended with danger to the person who uses it.”

In reference to the medicinal use of acetanilid, Butler (“Text-Book of Materia Medica, Therapeutics and Pharmacology,” 1902) says that, “Acetanilid is contraindicated in low fevers, at any rate, in repeated doses; in fatty or dilated heart, blood disorders, advanced tubercular disease and exhaustion from hemorrhages.”

Its action in neuralgias, particularly when associated with monobromated camphor, is quite favorable. As many practitioners know, the pains of neuritis, lumbago, gastralgia, sciatica, dysmenorrhea, and nearly every kind of headache usually yield to its analgesic effect.

Without enlarging here on the therapeutic applications of acetanilid, it may be remarked, *en passant*, that there are several proprietary preparations in the Canadian drug market which are said, by different chemists who have analyzed them, to be mechanical mixtures of acetanilid and one or more such substances as sodium bicarbonate, caffeine, ammonium bromide, salicylic acid, sodium salicylate, etc.

The headache powders analyzed by Mr. McGill are of this class, for he remarks: “It will be noted that in most cases the depressant effect of acetanilid upon the heart is sought to be counteracted by the addition of caffeine, carbonate of sodium, or other drug of like character.”

Acetanilid administered in ordinary doses, at proper intervals, and associated with correctives, cannot be declared to be a

poison, and its sale in the form of headache powders, although undesirable, will continue. Habitual consumers of that drug and its congeners, however, do not ask for headache powders; antipyrin, antifebrin and phenacetin are sold to them by the ounce package. These silly people dose themselves, *largæ manu*, and sometimes the dose is too large. But that is another story. Perhaps, the coroners might say something about it. J. J. C.

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### PROPOSED AMENDMENT TO THE PRESENT ONTARIO ACT CONCERNING STATIONARY ENGINEERS.

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THROUGH the kindness of Mr. Charles Mosely, Chairman of the Central Committee of the Stationary Engineers of Ontario, we have secured a copy of a proposed amendment to the present Ontario Act concerning stationary engineers, and also a reprint of an editorial on the subject from the February, 1906, issue of the *Engineering Journal of Canada*. The main provisions of the proposed amendment are:

1. The Lieut.-Governor-in-Council to appoint a board consisting of a chairman and ——— members for the purpose of examining applicants and granting certificates to all persons operating steam boilers of 50 horse-power or over.

2. It shall be unlawful for any person to operate any boiler of 50 horse-power or over unless he has a certificate, granted under the provisions of this Act.

3. It shall be unlawful for any person to employ an engineer to take charge of a boiler of 50 horse-power or over unless such person holds a certificate under the provisions of the Act, and any person who shall be guilty of operating, or any employer who shall employ any person to operate, a boiler contrary to this Act, shall be deemed to have committed a misdemeanor and shall, upon conviction, be fined not less than ——— dollars and not more than ——— dollars for each offence.

4. Every engineer who shall be in charge of any steam plant coming under the provisions of this Act at the time it comes into force or any engineer who has had two years' experience and who applies before the expiry of one year, shall, upon proving his character and upon paying the prescribed fee, receive a cer-

tificate for the term of two years, and such certificate must be renewed from time to time as it expires, provided, however, the Board shall have power to revoke any certificate upon proof of incapacity, drunkenness, or improper conduct.

5. Any person who feels himself aggrieved by the decision of the Board of Examiners, shall have the right (upon notice being given to that effect) to appeal to the Minister of Agriculture.

6. All candidates for certificates, except as provided for in section 4, shall furnish evidence of their good character, and of having at least three years' experience, either as assistants in an engine room, or boiler room, or as having full charge, and shall submit to such examination, written or oral, as the Board may determine.

From the statements made in the editorial referred to above, it appears that the license law for stationary engineers in Ontario is only optional, while in all the other Provinces of Canada a compulsory license law, in some cases civic, in other cases provincial in character, is in force.

There is no good reason why an amendment to the present Act, to make the stationary engineers' license compulsory in Ontario, should not be made law. No drunken or incapable man should be tolerated in such a responsible position for any reason. There are engineers who are capable employees and sober men, though they are not as fluent of speech or as ready with the pen as some of their compeers. No injustice would be done them under the amended Act, as they would be protected under the terms of Section 4 of that Act.

For those engineers who are ambitious to excell, who look for high pay, examination is the true test of efficiency. It is the means employed to ascertain the capacity of a prospective lawyer or physician. It must be remembered, however, that engineers should not only understand their duties and be able to explain the reasons for their actions to examiners, but that they should be willing and able to do their work faithfully and well. A knowledge of his duties is not the only desideratum in a stationary engineer. A stationary engineer, who is often his own fireman, must also keep his engine clean and in good condition if the best work is to be got out of it, and if dangerous accidents are to be prevented.

J. J. C.

## ANTI-VACCINATION WINS AT THE TORONTO BOARD OF EDUCATION.

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On March 1st, 1906, the members of the Toronto Board of Education, who are opposed to compulsory vaccination in the schools of this city, won, by a practically unanimous vote, Mr. Levee's motion to strike out the requirement of a vaccination certificate for admission to the schools being carried by a vote of 10 to 0. Mr. Levee's argument was based on two pleas, the individual liberty of parents and the impropriety "of introducing vile animal matter into the systems of children."

Dr. W. W. Ogden, a physician of Toronto, who is also a member of the Board of Education, spoke against the motion, and gave statistics to show the benefits of vaccination. He moved to refer the question to Dr. Sheard, M.H.O., but this motion was lost.

The following quotation from a letter sent us by Dr. Sheard, March 3rd, 1906, throws some light on the vaccination situation in Toronto at the present time: "So far as vaccination is concerned, the people of this city appear to prefer running the risk of the disease and subsequent quarantine to being vaccinated. The trouble with the whole question is the extreme mildness of the disease. If the mortality was 35 per cent., as it used to be in old epidemics of smallpox, the public would view the matter differently; but as it is at present, with the mortality below one per cent., they do not think the epidemic worth bothering with."

This being the opinion of the Medical Health Officer of Toronto, it would be quite useless for physicians to pelt the anti-vaccinationists of Toronto with the statistics of severe and deadly epidemics of smallpox. True, they, the anti-vaccinationists, would acknowledge, 450 persons died of smallpox at Gloucester (England) in 1895, and 1,600 others who survived bore the usual lasting evidence of the disease on their faces. True, from June to December, 1885, 3,175 persons died of smallpox in Montreal. True, that, though the present type of smallpox is mild, a virulent form of smallpox may attack the people of Toronto at any time. However, whatever fate betide, anti-vaccinationists would sooner bleed for an age at the shrine of individual liberty than sleep for a moment in the chains of vaccination. Very well, gentlemen, continue to persist in your devo-

tion to your carefully-calculated convictions; but who is going to pay the piper? Dr. Sheard tells us that, "The total expenditure for mild smallpox in Toronto during the year 1905 was \$7,029. Of this item the quarantine cost \$3,648 and the maintenance of smallpox patients \$3,381."

Should your anti-vaccination seed fall on good ground, in ten years' time, a considerable proportion of the population of this city will be unvaccinated. An unvaccinated population cannot be protected against smallpox, by faith in anti-vaccination, by quarantine, or by hygienic measures. Virulent smallpox will visit Toronto in the future, as it has in the past, and in that year, when it does come, the cost of quarantining smallpox and treating smallpox patients will cost a good deal more than \$7,029.

Should not a percentage of the cost of arresting so dolorous an epidemic be assessed on anti-vaccinationists, and the unvaccinated smallpox patients, who will be responsible for it? If anti-vaccinationists and unvaccinated adults erect themselves into a hygienic cult, holding opinions on medical and health matters opposed to the well-grounded convictions of the physicians of the whole world, should they not be made to back their opinions with their dollars, and, if not, why not?

\* J. J. C.

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## HELLO! — GIVE ME THE HEAD OFFICE OF THE BRITISH MEDICAL ASSOCIATION.

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THE other evening a few physicians were discussing the coming of the British medical men to the meeting in Toronto in August. Some one present struck a true note in remarking, "Let us play fair; they have not the time nor perhaps sufficient curiosity over in the Old Country to inform themselves as to the details of everyday life in this 'bloomin' Colony,' so let us tell them straight just what kind of weather, etc., to expect during their visit here."

Acting on our friend's suggestion, and having once been a "bloomin' Britisher" coming alone to this blessed spot, that now is home, sweet home, in its truest sense, in the spirit in which this commonplace word to the wise is spoken, let it be accepted by our esteemed confreres, whom ere long we will have the honor of calling "our guests."

With doctors the first consideration is, of course, bodily comfort. In this connection may we remark that we "shed" our flannels early in the summer, place mosquito netting over our beds, fly screens on our windows, wear light clothing, Panama hats, our handkerchiefs gracefully tucked inside our collars to keep them from melting away; palm leaf fans are often carried, and life is a summer morning. Perchance, after a day's heat, a jolly crackerjack of a thundershower may come up and cool off the atmosphere, the mercury dropping anywhere between ten and fifteen degrees; then we slip on our summer overcoats. Let our British friends bring a trousseau of cool as well as warm habiliments and be prepared. The weather-to-be is always advertised in the morning papers, so nobody taps the barometer in the hall—in fact, there are few halls that are adorned with barometers—it saves time to read the "probs." out of the papers. The quantities of fruit, vegetables, ices, and iced drinks that are consumed here will be a revelation to the dietetic, whose stomach is trained to lead the simple life. In Toronto, open trolley cars (not trams) run everywhere, on and off the tracks, occasionally; transfer tickets are obtainable, and a person may ride until he is sleepy for five cents. Tally-hos call at our best hotels and give a "see Toronto" drive, lasting about two hours, for one dollar. Our hotel accommodation is, on the whole, good, and all the comforts of home (with bath-room) may be had for from three-fifty to five dollars a day, including meals, nothing extra for ice nor grate fires. The ordinary physician, visiting a friend's home, who is unaccompanied by his valet, may be dismayed when he finds the row of boots, he left outside his sleeping apartment door, unbrushed in the morning. No Canadian maid will brush boots, and few households keep a "buttons." The reason is, American men wear patent leather shoes, and all over town shoe-shine parlors are situated, where one is comfortably seated, and while reading a paper "Swipsey" "shines 'em bully, sir, for a nickel." This, we know, will seem an odd custom to one to the manor born. Our laundries are tear factories, and lucky be the man who has, like the tramp, a button to which to sew a new shirt. But it's good for trade, and so a blessing in disguise.

August is the month that our city is almost deserted, the families filling hotels and cottages at all the summer resorts and



the seashore, so, unfortunately, many of our handsomest residences will be closed and some of our most delightful and hospitable people absent from town. However, the country clubs, the steamers to all points on Lake Ontario, and the many "half-rate" excursions arranged for by the Entertainment Committee, will fill every minute and no doubt prove very enjoyable to those accustomed to less sunny skies and landscape, be it ever so beautiful, obscured to view by the fogs for which John Bull holds the patent.

Some one may ask, What are the really Canadian physicians and their homes like? They are as a rule comfortably housed; they rise early in the bright summer mornings, and during leisure hours ride, golf, row, are all fond of sports, and enjoy easy hospitality, lingering late in the evenings on the broad piazzas that constitute the almost universal parlors during the summer time in America. In a word, the formula for an all-round Canadian is: Of Scotch, keep all you can lay your hands on—one drachm; of Irish wit, laughter and blarney, an ounce and a half; of English stolidity and conceit, a half a drachm; of French, enough spice to flavor the mixture and make the devil of a good fellow. Directions: Shake well and the mixture will keep strong and pure for ever and a day, and

"The eternal Sáki from that Bowl has pour'd,  
Millions of bubbles like us, and will pour."

Don't expect to find the minor details of life here exactly as they are "at home," friends. Frequently, indeed, have we Americans (for we have taken the oath of allegiance ages ago to this lovely Canada of ours) been the source of suppressed merriment to Britishers while travelling in Europe, but still more often, perhaps, a good-natured laugh on the part of Americans is heard at the expense of some fussy Englishman unaccustomed to our ways and means. A case in point was told recently, by a clever newspaper woman, of an occurrence in the dining car of one of our popular railroad lines. As nearly as memory serves us, we repeat it: An Englishman entered a dining car, seated himself, and, calling a waiter, gave the following order, in a loud tone of voice, "Waitah, bring me chops, very well done; coffee, very black coffee; dry toast, very dry toast, be sure its very dry and

very hot, don't ye know." The waiter went to the pantry end of the car and said, languidly, "Chops, toast and coffee," sauntered back to his post with a grin. At a nearby table an American, with laughing eyes, but grave face, said, "Waiter, bring me a glass of water and be sure its wet, very wet!"

Until we smile together, adieu.

W. A. Y.

### EDITORIAL NOTES.

#### **Flagrant Violations of the Post Office Regulations.—**

We notice in the *British Columbia Pharmaceutical Record* (Dec., 1905), that flagrant violations of the post office regulations, by using the mails for the conveyance of questionable and illegal articles into Canada, and also pernicious literature advertising the same, are charged against some parties unknown in the United States. It is also stated in the same editorial that these criminal articles may be readily obtained in prominent Canadian departmental stores. It appears that, if asked for the article by name, a druggist may sell any of the articles or drugs without note, comment or advice, as long as he observes the poison regulations. Should he, however, become acquainted with the probable condition of his customer, the sale becomes by that knowledge illegal, and he is rendered liable to two years' imprisonment. The criminal law on this subject is very clear, and we print it for the information of our readers: "Chap. 162, sec. 48, Criminal Law of Canada.—Everyone who unlawfully supplies or procures any poison or other noxious thing, or any instrument or thing **whatsoever**, knowing that the same is intended to be unlawfully used or employed with intent to procure the miscarriage of any woman, *whether she is or is not with child*, is guilty of a misdemeanor and is liable to two years' imprisonment." It is really a serious matter, that the Canadian mails are regularly used to introduce from the American side emenagogues, abortifacients and aphrodisiaes. A remedy for this evil may not be easy to find. However, we commend the discovery of the same to the serious consideration of the Canadian post office authorities. The officers of the Canadian Customs, doubtless, know of the evil complained of, and could give the required information to the Department of the Canadian Postmaster-General.

**Bulletin No. 110 (Tincture of Ginger.)**—In Bulletin No. 110 “Tincture of Ginger” (Laboratory of the Inland Revenue Department), we find some memoranda regarding the alcoholic preparations of ginger. These preparations appear on the Canadian market under three distinct names, viz., tincture of ginger, essence of ginger, extract of ginger. The British Pharmacopeia, 1898, defines *Tinctura Zingiberis* as follows: Ginger, in No. 40 powder, 2 ounces; alcohol (90 per cent.), a sufficient quantity. Moisten the powder with two fluid ounces of the alcohol and complete the percolation process. The resulting tincture should measure one pint. This gives a solution of 1 in 10. Of 62 analyzed samples of *Tinctura Zingiberis*, the following report is given in the bulletin:

|                   |             |                |           |
|-------------------|-------------|----------------|-----------|
| Genuine .....     | 46          | samples = 74.2 | per cent. |
| Doubtful .....    | 2           | “ = 3.2        | “         |
| Adulterated ..... | 14          | “ = 22.6       | “         |
| <hr/>             |             |                |           |
| Total .....       | 62 samples. |                |           |

The term “adulterated” has reference to the alcoholic strength only. Essence of ginger is not recognized by the British Pharmacopeia of 1898. In earlier editions a *Tinctura Zingiberis* Fortior, ordinarily called essence of ginger, was defined as ginger percolated with alcohol, to form 1 in 2. This strong solution of the oleo-resin of ginger could be employed, by dilution with alcohol, to prepare the ordinary tincture. Of 23 analyzed samples of essence of ginger the following report is given:

|   |             |                 |           |
|---|-------------|-----------------|-----------|
| Equivalent in alcoholic strength<br>to the tincture ..... | 15          | samples = 65.22 | per cent. |
| Nearly equivalent to the tincture..                       | 1           | “ = 4.33        | “         |
| Not equivalent to the tincture.....                       | 7           | “ = 30.45       | “         |
| <hr/>   |             |                 |           |
| Total .....   | 23 samples. |                 |           |

Extract of ginger has no official recognition. It is usually weak in alcohol. Of 23 analyzed samples of extract of ginger the following report is given:

|                                     |    |                 |           |
|-------------------------------------|----|-----------------|-----------|
| Equivalent to the tincture .....    | 5  | samples = 21.73 | per cent. |
| Not equivalent to the tincture..... | 18 | “ = 78.27       | “         |

While essence of ginger is quite frequently up to the strength of the *Tinctura Zingiberis* (70 per cent. of the samples reported in the bulletin reaching this standard) the extract of ginger is usu-

ally very weak in alcohol, only 21.73 per cent. of the samples imported reaching the standard of the *Tinctura Zingiberis*.

**Olive Oil and Cotton-Seed Oil.**—In Canada the terms salad oil and olive oil are used synonymously by many people, who when purchasing salad oil suppose that they are getting olive oil. In Bulletin No. 111 (Laboratory of the Internal Revenue Department, Ottawa) A. McGill places the respective merits of the two oils fairly before the reader. He says: "While it is certain that cotton-seed oil lacks the peculiar flavor of olive oil, it is probable that, so far as food value goes, it may be little inferior to that article. Certain highly refined grades of cotton-seed oil may be regarded as valuable foods, and, as these take the place of olive oil in the making of salads, it is perhaps not unnatural that they should be termed salad oils. It is, however, much to be regretted that such brands of cotton-seed oil are not sold under some characteristic name, such as cotton-seed salad oil, thus making **their** fraudulent sale impossible. The samples reported by the analyst are classified as follows:

|  |              |
|--|--------------|
| Genuine olive oil.....                 | 66 samples.  |
| Doubtful.....                          | 2 "          |
| Cotton-seed oil sold as salad oil..... | 24 "         |
| Cotton-seed oil sold as olive oil..... | 16 "         |
| <hr/>                                  |              |
| Total .....                            | 108 samples. |

The cotton-seed oil industry belongs to the southern states of the neighboring republic. Of late years a large part of this oil has found a market as a food. It can be refined so as to imitate olive oil, or mixed with a beef stearine so as to imitate lard, with profits from 25 to 100 per cent. greater. Cotton-seed oil, *oleum gossypii seminis*, is much used in pharmacy. As a comestible, however, olive oil, owing to its old-time reputation and its well-proved merits, holds a higher place in popular esteem than its American rival. Cotton-seed oil, properly labeled, should be sold on its own merits, and no effort to simulate the label of a manufacturer of olive oil should be permitted.

**Lunatic and Idiot Asylums of Ontario.**—We extract a few items of interest from the Thirty-Eighth Report of the Inspector of Public Charities and Prisons, upon the Lunatic and Idiot Asylums of Ontario. At the close of the year ending 30th Sept.,

1905, 5,092 insane persons were confined in the Provincial Asylums for the Insane, which are situated at Toronto, London, Kingston, Hamilton, Mimico, Brockville, Cobourg, and Penetanguishene; 24 were confined in the Homewood Retreat, Guelph, a private institution; there were 33 insane convicts in Kingston Penitentiary; 21 insane and idiotic persons in the common gaols; 742 in the Asylum for Idiots at Orillia; there were 95 applications on hand for admission to some one of the insane asylums; 206 applications on hand for admission to the Orillia Asylum for Idiots. So that the total number of insane and idiotic persons, known to the Department, 30th September, 1905, was 6,213. During the year ending 30th September, 1905, 6,711 patients were on the asylum registers and actually under treatment. The result for the year are tabulated as follows:

|   |          |           |
|---|----------|-----------|
| Discharged cured.....                   | 315=4.69 | per cent. |
| Discharged improved.....                | 84=1.25  | "         |
| Discharged unimproved .....             | 45=.67   | "         |
| Escaped .....                           | 18       |           |
| Died.....                               | 343=5.11 | "         |
| Transferred from one asylum to another. | 72       |           |
| Remaining in asylums 30th Sept., 1905.  | 5844     |           |
| Total.....                              | 6711     |           |

Tuberculosis caused 43 deaths; senile decay, 37; epilepsy, 29; exhaustion of mania, 22; phthisis, 20. If the 20 deaths ascribed to phthisis are added to the 43 deaths ascribed to tuberculosis, the total mortality from that cause, viz., 63, is by far the **greatest** factor in the mortality of the insane for the past year. Of 5,834 patients in residence, 30th September, 1905, 5,038, viz., 86.35 per cent., of the whole have been in residence for periods of from *one to twenty years and upwards*; 1,030 have been in residence from ten to fifteen years; 643 for twenty years and upwards; 538 from fifteen to twenty years. Table No. 12, which shows the trades, callings and occupations of the 29,331 patients admitted into the asylums since their installation, reveals that housekeepers head the list with 5,434 cases; laborers follow with 4,680; farmers, 4,368; domestic servants of all kinds, 3,725. The next large numbers are: Unknown or other employment, 2,962; no occupation, 1,467. The extraordinary difference is apparent when it is noted that the next two classes are, wives, with 650 cases, and carpenters, with 471. 40 lawyers appear on this list and 65 physicians.

**The Thirty-Sixth Annual Report of the Inspector of Prisons and Public Charities (upon the Hospitals and Charities, etc.) of the Province of Ontario, being for the Year ending 30th September, 1905.**—It is not possible in an editorial note to do more than to mention some of the interesting and important matters dealt with in the introductory to the report on hospitals and charities, etc. We hope, however, that many of our readers will ask the Inspector, Dr. R. W. Bruce Smith, for this report, as the physicians of this Province ought to be in a position to judge for themselves of the work done and the advances contemplated in the hospitals, refuges and orphanages of Ontario. Among the matters discussed in the introductory are: The new hospital at Toronto; the educational function of an hospital; training school for nurses; consumptives in hospitals; education in regard to consumptives; registration of private hospitals; the care of feeble-minded women; county houses of refuge; the undesirable immigrant class; orphanages. The 60 hospitals of Ontario had, as the report shows, a successful and progressive year:

|   |        |
|---|--------|
| Number of patients in the hospitals October 1st, 1904 . . . . . | 2,491  |
| Number of patients admitted during the year . . . . .           | 34,351 |
| Baths in hospitals during the year . . . . .                    | 1,483  |
| Total under treatment during the year . . . . .                 | 38,325 |

The above figures do not include persons receiving treatment and medicine as extern patients. The following useful statistic is also extracted from the report:

|   |              |
|---|--------------|
| Number of deaths in Ontario hospital during the year . . . . .            | 2,103        |
| Percentage of deaths to number under treatment . . . . .                  | 5.49         |
| Total number of days' stay in the hospitals . . . . .                     | 798,423      |
| Provincial grant to hospitals . . . . .                                   | \$410,000.00 |
| Amount received from all sources . . . . .                                | 787,871.28   |
| Subscriptions, donations, etc . . . . .                                   | 147,831.67   |
| Total expenditure for hospitals, (including capital account) . . . . .    | 1,226,482.86 |
| Average cost of each patient per diem . . . . .                           | 1.13         |
| Percentage of provincial grant to total maintenance expenditure . . . . . | .12          |

**The Seventy-Fourth Annual Meeting of the British Medical Association at Toronto, Canada, August 21st to 25th, 1906.**—A Toronto medical correspondent of the *British Medical Journal* contributes a fine article, which appears, in parts, in two successive issues of that journal, viz., Feb. 3rd and 10th, 1906. The correspondent writes entertainingly of the early history of Toronto

and its great expansion in recent years, mentions with praise its hospitals, asylums and orphanages, and likewise alludes to its exhibition and the city parks. Descriptions, accompanied with illustrations, are given of notable structures, such as the University of Toronto, the Medical Buildings of the University of Toronto, the Legislative Building, Queen's Park, and the Municipal Building, Queen Street West. Mention is also made of important buildings, viz., Osgoode Hall, (Law Courts), Massey Music Hall, St. Michael's Cathedral (Catholic), St. James' Cathedral (Anglican), Metropolitan Methodist Church, St. Andrew's Church (Presbyterian), and others. To intending travellers information is given as to the trans-Atlantic trip, the best means of reaching Toronto, by boat or rail, the transcontinental tour, railway rates, hotels, etc.

J. J. C.

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#### PERSONALS.

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DR. ALLEN BAINES and Mrs. Baines recently returned after spending a few weeks in Jamaica.

DRS. H. B. ANDERSON, Chas. H. Hodgetts, J. T. Clarke, and Jas. M. MacCallum are tendered congratulations upon the recent gift to each of a son and heir.

DR. and Mrs. W. H. B. Aikins, Dr. and Mrs. Henry Oldright, and Dr. Alex. McPhedran have left Toronto to attend the International Medical Congress at Madrid, Spain.

# Obituary

## DEATH OF DR. MATTHEW WALLACE.

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MARCH 3RD, 1906, Dr. Matthew Wallace, a well-known and highly esteemed physician of Toronto, died at his residence, corner of Queen and George Streets, after an illness of over seven months. Last September he underwent an operation for the removal of an abdominal tumor; but, as the disease proved to be malignant, the removal of the tumor was not attempted. Dr. Wallace graduated as M.B. from the University of Toronto in 1880, M.D.C.M. University Victoria College, Cobourg, 1880, and became a member of the College of Physicians and Surgeons, Ontario, 1880. He practised always in Toronto. The deceased was an earnest worker in connection with St. Michael's Hospital. In religion he was a Catholic. Being of a very charitable disposition, he was much beloved by his patients, many of whom belonged to the poorer classes.

Deceased leaves a widow, one girl and four boys, the eldest child being only thirteen years of age.

The funeral, which was held March 6th, 1906, from the family residence to St. Paul's Catholic Church, and thence to Mount Hope Cemetery, was largely attended.



## Correspondence.

*The Editor cannot hold himself responsible for any views expressed in this Department.*

### THE POSITION OF TORONTO ON THE QUESTION OF VACCINATION.

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TORONTO, MARCH 13TH, 1906.

*To the Editor of THE CANADIAN JOURNAL OF MEDICINE AND SURGERY :*

*Dear Mr. Editor,*—The Board of Education of the City of Toronto, by its recent action in deciding to abolish the rule compelling evidence of successful vaccination before children can be admitted to school, has occasioned considerable surprise to those citizens who look to the School Board to support and lead in all matters of an educational character. Their attitude in this matter is the more open to criticism because they give as their only reason that a petition signed by over one thousand people made such a request. Many of these were doubtless individuals who were not in the slightest degree capable of forming any conclusions regarding vaccination, pro or con, and the anti-vaccinationists are claiming no small degree of credit for converting people to their pet fad in consequence of the School Board's action.

Every medical man knows that for years past there has been an organized body, known as the Anti-Vaccination League, whose business has been that of preparing literature and pamphleteering against vaccination. These publications abound in alarming, untruthful statements, adroitly prepared for the ignorant and ill-informed; and framed with the express purpose of sapping the results of evidence and faith in well established, tried, and proven methods. Such statements are often of the wildest character; for instance, when the claim is made that such diseases as cancer, consumption, chronic skin diseases, blood poisoning, and gangrene are common occurrences, and distinctly traceable to vaccination.

They submit evidence long since refuted by the Royal Commission on Vaccination, and re-print it with all the force and reiteration of established fact, knowing that it has been disproved. The statement contained on page 239 in their pamphlet, "Vaccination a Delusion," published by the Anti-Vaccination League, is a fair example. It, is there stated:

"Several other cases were detected at Sheffield, and were adduced by Mr. A. Wheeler in his evidence before the Commission (6th Report, p. 70): and many others are to be found throughout the Anti-Vaccination periodicals. But the difficulty

of tracing such mis-statements is very great, as the authorities almost always refuse to give information as to the cases referred to when particular deaths from smallpox are recorded as 'unvaccinated.' Why this effort at secrecy in such a matter if there is nothing to hide?"

The facts regarding all these details are fully set forth in the report of Dr. F. W. Barry, of Sheffield, who was appointed by the Local Government Board to conduct an exhaustive investigation into the whole matter, and which report stands forth a monumental testimony to the value of vaccination. The report was further submitted to Sir George Buchanan, for criticism and analysis, who reports thereon as follows:

"First, of the children under ten years of age living in Sheffield during 1887-88 under the common conditions of infection in the whole borough," per thousand of the number of children in each class:

|   |      |
|---|------|
| The attack-rate of the vaccinated was .....   | 5    |
| The attack-rate of the unvaccinated was ..... | 101  |
| The death-rate of the vaccinated was.....     | 0.09 |
| The death-rate of the unvaccinated was.....   | 44   |

"Under the general circumstances of the Sheffield epidemic, therefore, the vaccinated children had, as compared with the unvaccinated children living in the town, a twenty-fold immunity from attack by smallpox."

Despite all the doubts which Dr. Alfred Russell Wallace has tried to throw into the minds of the people in Sheffield, let us read what Dr. John Robertson, Health Officer of the City of Sheffield, has to say upon the matter in his published report for 1903, page 26:

#### VACCINATION AND SMALLPOX.

"It is desirable when dealing with this subject to call attention to the fact that all our trouble and anxiety should not have been necessary had efficient protection been obtained by vaccination. Those who neglect to keep themselves in a condition of immunity from smallpox cause great and needless expense and anxiety to the large population who are properly protected. If every person kept himself in the condition which the nurses at the hospital and the Health Department staff must do there would be no smallpox—no hospital and other expenses. In this respect attention has been recently drawn to the custom in Germany of nursing cases of imported smallpox in a general hospital, where all the patients are so well protected by vaccination that special hospitals are unnecessary."

Such statements as the above, showing the results ten years afterwards, and the report of Dr. Barry, and Sir George

Buchanan's masterly analysis, could have no weight with the School Board when compared with the graphic and melodramatic appeal as set forth in the following terms from the Self-Protecting Pamphlet of Alfred Russell Wallace, published and distributed under the auspices of the League, when he states in the preface and opening chapters, "I appeal from the medical and official apologists of vaccination to the intelligence and common sense of my fellow-countrymen," and he forthwith proceeds to appeal in this opening stanza:

"To-day in all its dimpled bloom,  
The rosy darling crows with glee ;  
To-morrow in a darkened room  
A pallid, wailing infant see,  
Whose every vein from head to heel,  
Ferments with poison from my steel."  
A. H. Home.

After this what is there left to say? Such an array of facts and irrefutable arguments appear to have been quite convincing enough to settle the question for the Board of Education of the City of Toronto.

For my own part I wish, however, to place on record the fact that I have been steadily and persistently vaccinating the public in the City of Toronto for thirteen years; that a very conservative estimate would be 3,000 vaccinations per annum, which would constitute a grand total of upwards of 39,000 vaccinations, done directly under the supervision and authority of the Health Department of this city; that if such glaring maladies, ordinarily or even exceptionally, occurred as the anti-vaccinationists seek to make out, I must have had a very large number of such cases brought to my notice. Instead, however, beyond a few moderately sore arms, readily getting well with a few days' simple common-sense care, I am not aware that a single case of permanent disability or disease has ever occurred, and I challenge all the anti-vaccinationists in the country to prove the contrary. Further than this I would say, that I have had many nurses and employees who have been vaccinated and re-vaccinated by me, who have lived amongst smallpox, and who have enjoyed perfect health, free from disease of any character.

Within the last five years there have been in Toronto 135 cases of smallpox, with 22 new introductions. Only last month a young lady affected with smallpox travelled up and down on the street cars of this city while suffering from the disease. As the spots were becoming very angry she concluded that she would take a car to consult her physician, who, upon seeing her, notified me that he suspected the disease to be smallpox, and as a result the girl is now under my care.

Shortly before Christmas, 1905, the western portion of this

city was considerably agitated because a young man at the Jameson Avenue Collegiate Institute had attended there whilst suffering from smallpox, and had passed through all the stages of the disease, and at the same time mingling with the pupils of the institution without interference. It was feared a serious outbreak could not possibly be averted, yet the disease did not spread to any extent.

These are two instances which I claim fairly well illustrate that for some reason or other the people of the City of Toronto are not to any great degree at present vulnerable to the infection of smallpox. I claim the reason is to be found in the thirteen years of quiet, persistent vaccination that has been conducted by the Health Department and physicians of this city. I claim the citizens of Toronto are those of this Province at present best protected by vaccination, and I justify that claim by the statistics compiled from the reports of the various portions of the Province by the Provincial Board of Health. In the year 1905, just concluded, 56 cases of smallpox occurred, and were treated in the Smallpox Hospital of this city. Among these cases only two were vaccinated. The statistics for the City of Montreal show that in 1902 there were 361 patients cared for and treated in the Smallpox Hospital. Of these 322 had never been vaccinated, and of the rest only three showed any vaccination marks.

In the recent outbreak in the western portion of this city a nursing child was found to be suffering from a moderately severe smallpox eruption, on account of which it became necessary to remove the infant with its mother to the Smallpox Hospital. I strongly advised this unaffected lady to be vaccinated. She demurred slightly, as she had been frightened by the anti-vaccination pamphleteers, but consented to my vaccinating her, which I did on two different occasions, with the result that she nursed her child and lived amongst smallpox patients for five weeks without contracting the disease. On the same street I removed another child suffering from the same disease. Subsequently, in the house, the mother of the nursing infant showed evidence of the smallpox. This lady had not been recently vaccinated. I urged the immediate vaccination of her nursing babe, and the removal of mother and child to the Smallpox Hospital, which was done, and although the vaccinated nursing child nursed from its mother throughout the disease, with the exception of a couple of days when the fever was at its height, and lived in the Smallpox Hospital with smallpox patients, for five weeks, till the mother was convalescent, it showed not the slightest degree of ill-health, and to-day is a ruddy, chubby, rosy monument to the protecting influence of vaccination.

Professor Osler, in speaking of the disease, says: "Perhaps

the most remarkable instance in modern times of the rapid extension of smallpox occurred in Montreal in 1885. For some years previous vaccination had been neglected in the city, as many of the French-Canadians are opposed to it, consequently a large unprotected population grew up in the city. On February 28th, 1885, a Pullman car conductor, who had travelled from Chicago, where the disease had been slightly prevalent, was admitted into the Hotel-Dieu, the civic smallpox hospital being at that time closed. Isolation was not carried out, and on the 1st of April a servant in the hospital died of smallpox. Following her decease, with a negligence absolutely criminal, the authorities of the hospital dismissed all patients not showing any symptoms of the disease. The disease spread like fire in dry grass, and within nine months there died in the city, of smallpox, 3,164 persons."

The trade and commerce of Montreal was ruined for a decade, and the city was ostracized, because of the neglect of the protection which vaccination afforded.

I challenge the whole brood of anti-vaccinationists, either in the City of Toronto, or in any centre of the world, to submit the evidence of any man of respectable standing or of scientific attainments, whose personal experience and knowledge is contrary to mine. I submit in this connection the following extract, given on page 31 of the report of the Public Health Committee of the London County Council, and for the City of London, England, for the year 1902:

"(d) Vaccination or re-vaccination of persons exposed to smallpox infection. The accumulation of a large number of unvaccinated children in London rendered of especial importance during the recent epidemic the promptitude with which vaccination was offered to the inmates of invaded houses and the willingness of the inmates to accept the services of the vaccinator. The reports of a few of the medical officers of health tell of the actual results obtained under the circumstances which existed. Thus Dr. Davies gives account of 1,673 persons known to have been exposed to infection of smallpox in Woolwich. Of these, 1,171 were vaccinated within three days of exposure to infection, or had been vaccinated the previous ten years, and only one of these persons contracted smallpox; 420 'contacts' refused vaccination or were otherwise unprotected by vaccination in the ten years before or within three days after exposure to infection, and 45 of these persons contracted smallpox; eight contacts had never been vaccinated before exposure to infection and not vaccinated within three days of exposure, and of these two were attacked."

I further submit the statement of Henry D. Littlejohn, M.D., Medical Officer of Health of the City of Edinburgh, who in dealing with the smallpox epidemic of that city of the year 1901, says, page 5:

"Such, my Lord, has been the conduct pursued by your Medical Officer of Health with regard to the existing epidemic, but I cannot close this short statement without impressing upon your Lordship and Council that this and other large towns will be subject from time to time to invasions of smallpox, unless the compulsory provisions of a Vaccination Act be extended to Scotland.

"If the poor do not look after their own interests with regard to such a disease, ultimately they and all classes of society suffer in consequence. It is the duty of the public to take all possible measures for self-protection, and in the present case the remedy is so easy and efficacious that every one who neglects to avail himself of it is chargeable with gross carelessness, and might justly be subjected to legal enactments."

Yet, while this testimony could be multiplied by the volume, if one had the time and the patience, the anti-vaccinationists are circulating among the people of this city the report that vaccination is admitted by even reliable medical authority to be no protection and a fake; that it is even being performed by medical men simply for the purpose of increasing their professional revenues, and is a worn-out, exploded delusion, menaced with dangers.

The above gentlemen, whose opinions I have quoted, are the paid officials of leading cities, sworn to faithfully employ every proper method and use every effort to protect the health of the community of which they are in charge. Are they falsifiers of the truth or are they not competent to judge between cause and effect?

The iniquity is in the fact that a body controlling the High Schools and Public Schools of our city, and having charge to that extent of its educational interests, should show no better judgment than to thus cast aside all evidence and authority.

Faithfully yours,

CHARLES SHEARD, M.D.,

*Medical Health Officer.*

ONTARIO SOCIETY FOR THE REFORMATION OF  
INEBRIATES.

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199 VICTORIA STREET,  
TORONTO, FEB. 8TH, 1906.

*To the Editor of THE CANADIAN JOURNAL OF MEDICINE AND SURGERY :*

*Dear Sir,*—On behalf of the Ontario Society for the Reformation of Inebriates, we desire to notify you that the Society is now prepared to undertake the care and treatment of inebriates, more particularly of the indigent class. Arrangements have been made for giving home treatment in suitable cases, and with one of the hospitals of Toronto to receive, for a period of from one to three weeks, such cases as require hospital care. A medical officer has been appointed to administer treatment; there is a Medical Consulting Committee, the functions of which are of an executive character, and a Probation Officer to take the supervision of inebriates subsequent to treatment. Dr. A. M. Rosebrugh is the Medical Officer; Drs. Wm. Oldright, E. J. Barrick and W. Harley Smith constitute the Consulting Committee; while W. J. K. Bellamy, Esq., is the Probation Officer.

We greatly desire your cordial co-operation in this movement, first, in inducing inebriates to avail themselves of the advantages offered by this Society, and secondly, in maintaining a friendly interest in such cases subsequent to treatment.

The treatment extends over a period of three weeks; in many cases it may be conducted at the home of the inebriate, while in others, hospital treatment may be required, but not necessarily for the full three weeks.

For the purpose of husbanding the limited resources of the Society, and also with a view to the encouragement of self-respect and ambition on the part of the inebriate, the cost of treatment is to be understood as a loan to be repaid as soon as convenient after treatment. The cost of home treatment will not exceed \$10.00 in all, while hospital treatment will be from \$4.00 to \$5.00 a week extra.

The Probation Officer will give a helping hand subsequent to treatment, and will act in the capacity of a friendly Christian visitor and adviser, assisting in obtaining employment, etc.; he will endeavor to place the inebriate on a higher plane of life and living, and also, if possible, in touch with the church of his choice.

Yours truly,

GEORGE M. WRONG, *President.*

A. M. ROSEBRUGH, *Secretary.*

# *News of the Month.*

## BRITISH MEDICAL ASSOCIATION—ABSTRACT OF MEMORANDUM FOR OFFICERS OF SECTIONS.

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*Meetings of Sections.*—The Sections will meet on Tuesday, Wednesday, Thursday and Friday, August 21st, 22nd, 23rd and 24th, at 9.30 a.m., adjourning at 12.30 p.m. each day.

*Sectional Committee of Reference.*—The President, Vice-President and Secretaries of each Section will form a Committee of Reference, and shall exercise the power of inviting, accepting, declining, or postponing any paper, and of arranging the order in which accepted papers shall be read.

*Guests.*—Papers by guests will be presented upon invitation. If the Committee of Reference desires to invite persons to read papers in the Section who are not eligible to become members of the Association, their names should be submitted for the approval of the Council. If it is desired to ask any such persons to attend the meetings of the Section and take part in the discussions a general permission to issue such invitations should be obtained.

*All papers read are the property of the British Medical Association, and may not be published elsewhere than in the "British Medical Journal" without special permission.*

### DISCUSSIONS.

Secretaries are requested to communicate to the General Secretary a preliminary statement of the arrangements made for the discussions in the Section to be laid before the Council at the earliest possible moment. This should consist of a statement of the subjects selected, together with the names, if possible, of the gentlemen who have undertaken to open the discussions.

### PAPERS.

The offer of a paper should not be accepted on its title alone, and save under exceptional circumstances no paper should be accepted for reading until it has been sent to the secretaries.

Secretaries are requested to communicate to the General Secretary of the Association, 429 Strand, London, W.C., not later than June 15th, a complete list of papers approved and accepted for reading.

It is suggested that the secretaries resident in the United



Kingdom should collect papers from members there, and the secretaries in Canada should deal with all papers in the Dominion and the United States.

Only titles of papers which have been accepted, and which may be reasonably expected to be read, should be included in the programme of sectional proceedings.

Offers of papers ought not to be accepted in excess of the number likely to be read. Failure to observe this condition leads to many inconveniences and gives rise to complaints of unfair preference.

#### REPORT IN THE "BRITISH MEDICAL JOURNAL."

A report of the actual proceedings of the Section will be published in the *British Medical Journal*, and in any communication addressed to persons who offer papers to be read in a Section two things should be made quite clear:

1. That papers read are the property of the British Medical Association, and cannot be published elsewhere than in the *British Medical Journal* without special permission.

2. That the authors of papers not read have no claim for the publication of their papers in the *British Medical Journal*. *Papers cannot be taken as read.* If not read they form no part of the proceedings of the Section.

Secretaries are requested to co-operate in preparing the report of the proceedings of their Section for publication in the *British Medical Journal* with the reporter of the *British Medical Journal* appointed to the Section, and to hand to him all matters for publication for transmission to the editor of the *British Medical Journal*, 2 Agar Street, Strand, London, W.C.

The attention of authors should be particularly directed to the time limit (see below), and the text of papers submitted for publication in the *British Medical Journal* as part of the report of the Section should represent what is actually read to the Section.

It is important that each author should hand the text of his paper in proper form for publication to one of the secretaries of the Section immediately after it is read. It should be made clear that neglect to comply with this request may result in the omission of the paper in question from the proceedings of the Section subsequently published in the *British Medical Journal*.

*Time Limit.*—The attention of the Council of the Association has been called to the non-observance by readers of papers of the rule as to the time limit, which is as follows: "No paper must exceed fifteen minutes in reading, and no subsequent speech must exceed ten minutes." The attention of Presidents and Secretaries of Sections is particularly requested to this rule.

Honorary Local Secretaries,

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|----------------------------|--|
| DR. F. N. G. STARR,        | } The Medical Laboratories,<br>University of Toronto,<br>Toronto, Ont. |
| PROFESSOR J. J. MACKENZIE, |  |
| DR. D. J. GIBB WISHART,    |  |

**FIFTEENTH INTERNATIONAL CONGRESS OF MEDICINE,  
LISBON, APRIL 19th TO 26th, 1906.**

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THE Executive Committee of the Fifteenth International Congress of Medicine has made sure of a considerable number of apartments (rooms with one bed, or, in the greater number of cases, rooms with several beds) at six, eight and ten francs a bed, according to the list. Board is also provided in some lodgings at fifteen francs a head. The tickets can be got at the Rocio Station (on arriving at Lisbon by railroad) for the eight days during which the Congress lasts.

Meals can be easily got at restaurants and hotels in Lisbon, as well as at the restaurant of the Congress. Lodgings will be distributed as the demands for them come in. Demands should be sent in before March 31st to Mr. Manoel Jose da Silva, Palacio Foz, Praça dos Restauradores, Lisbonne, who has charge of this part of the business.

Railway fares have been definitely settled with French, Spanish, and Portuguese railroads, which allow members of the Congress to return by a route different from the one by which they go, with a reduction of 50 per cent. in the price, on condition that the trip both ways is made by rail.

The Committee of the Congress will begin immediately to send out special uniform cards for the railway companies of the three countries. We have just learned that the Italian railway companies will also grant the 50 per cent. reduction.

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**DISTINGUISHED HONORS FOR PROF. MACALLUM, F.R.S.**

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PROF. ARCHIBALD B. MACALLUM, Professor of Physiology at the University of Toronto, has received the high honor of election as a Fellow of the Royal Society of London. This is one of the most distinguished scientific honors, and was conferred on Prof. Macallum in recognition of his research work in physiology. There are only two other Fellows of the Royal Society in Canada.

Dr. Macallum was born in Westminster township in 1858, and after being for some time a school teacher, entered the University, graduating in Arts in 1880 and Medicine in 1889. He has been admitted by the College of Physicians and Surgeons, but has never practised. From 1884 to 1887 he was a Fellow of the University, and in the latter year was appointed a lecturer in physiology. In 1891 he became professor in that subject in

the medical faculty, and associate professor in the Arts faculty a year later. He is a member of the University Council. His research work has been chiefly in problems of cell physiology and cell chemistry, and the results of his work have appeared in several scientific journals.

In 1885, 1896 and 1897 Dr. Macallum was President of the Canadian Institute. He was Chairman of the Toronto Executive Committee in connection with the meeting of the British Association here in 1897, and was vice-president of the section on physiology during the meetings.

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### UNDERGRADUATES HONOR PROF. MACALLUM.

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PROF. A. B. MACALLUM, of the Medical Faculty of Toronto University, who recently received the distinction of being made a Fellow of the Royal Society, was presented, on March 10th, with a beautifully illuminated address by the undergraduates of the Medical College.

The address expressed greetings and sincere congratulations that "years of faithful labor in the cause of scientific research have at last been rewarded by the highest honor and most significant distinction to which a scientist can attain. It marks its recipient as one whose consistent effort and untiring zeal have contributed materially to the body of the world's scientific knowledge.

They rejoiced not only as students of a university over which the distinction cast a lustre, but as Canadians, whose name and fame had been exalted not a little thereby.

But the greatest consideration that prompted their pleasure was the feeling of each one that he had a personal friend in Prof. Macallum, who had their interests at heart, and taught his students not only devotion to their high calling, but inculcated in them those high principles that tended to the making of men and the development of character.

The hearty and prolonged applause of the students when the address was handed to the Professor evidenced the sincerity of their congratulations.

Prof. Macallum, in replying, said he believed he had the confidence of the medical students, and he valued that even more highly than the degree of F.R.S., because it counted much in his efforts for the future of the medical profession and in beating down what is not sane in public life and in professional life.

Dean Reeve and Dr. McKenzie also spoke briefly and added their congratulations.

**DR. F. LEONARD VAUX TRANSFERRED TO TORONTO.**

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AMONG the recent appointments to the permanent militia force is that of Dr. F. Leonard Vaux, of Ottawa, who becomes Major in the permanent Army Medical Corps and moved to Toronto a few weeks ago. He was born in Brockville, and is a grandson of Thos. Vaux, of Ottawa, one time Accountant of the House of Commons. He is a son of Dr. Harry Vaux, of Toronto. He was educated at the Brockville Collegiate Institute and Trinity Medical College. He graduated with honors in 1895. He was house surgeon at the Toronto General Hospital in 1895-6, resident surgeon at Mount Sindi Hospital, New York, in 1896-98, and medical superintendent of St. Luke's Hospital in 1898.

Dr. Vaux has a record of valuable service in South Africa. He obtained his commission first as lieutenant in the 42nd Regiment, was appointed lieutenant in the Army Medical Corps in January, 1900, and sent to South Africa with the second contingent to be attached to the Royal Army Medical Corps. He served as subaltern in the 19th Brigade Bearer Company under Major C. E. Nichol, R.A.M.C., from February to November, accompanying General Sir Ian Hamilton to Pretoria, Lydenberg, and Komatipoort. After returning to Canada *via* London he was sent with the South African Constabulary to South Africa in March, 1901. He returned to Canada, September, 1902.

He holds the honorary rank of captain in the Imperial Army, and has the Queen's medal and three clasps, and the King's medal and two clasps.

Dr. Vaux developed an early fondness for military life. His father was medical officer of the 42nd Regiment for sixteen years, and the present major when only eight years old accompanied him to camp.

Major Vaux has attended twelve camps of instruction, was attached to the 10th Royal Grenadiers in 1895, and holds a first-class infantry certificate and a first-class equitation certificate. He is qualified by active service for the rank of major in the Army Medical Corps.

His great grandfather on his mother's side served in 1837, and his maternal grandfather in 1866. A great uncle was an officer in the Royal Navy, and was present at many engagements in the early Victoria era.

Major Vaux married last year Miss Edith Sparks, of Ottawa, a lady of beauty and talent, who is on her father's side a Sparks of Essex, and on her mother's a Stewart of Appin. She is a cousin of Mrs. Clifford Sifton.

## AUTOMOBILE, THE DOCTOR'S FRIEND

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BY DR. GODFREY, OF MIMICO.

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FROM a rather dubious owner of an automobile, I have become enthusiastic, and now wonder why any physician who has work on the road should be without one.

Outside of the original price, the machine has cost me three cents per mile. This includes repairs, renewal of the batteries, gasoline, dope, oil, carbide, etc., in short, everything to make it go, and keep it going.

To a medical man it makes the grind of general practice a pleasure. After a forty or fifty mile drive during the day you are able to have a quiet dinner and a good cigar feeling as other men, and not as a slave. If you have a night call; well, all you have to do is to walk out to the stable, turn on your lights (use an acetylene Pilot), and with half a turn of the crank you have something that will take you there at twenty miles an hour, and you are back in half the time it requires with a horse or street car.

The fortunate part of a motor for a medical man in the country is that his horses can be turned out to pasture, when to be on the roads would be very hard on them; for what medical man likes to see his horses on a hard dusty road with a July sun hitting them square on the head, and with the certain knowledge that when he reaches his destination they will have to fight the flies. So it is, especially "In the good old summer time," the motor has every other method of locomotion beaten a mile in more ways than one.

I know little about the merits or demerits of any other machine than my own, a Model "C" Ford, but know enough about it to leave it alone except to see that there is plenty of oil, gasoline, electricity and water in the proper places, and though I had practically no instructions on either the mechanism or operation of my car, I have never failed to drive home, nor in fact had a more serious problem to tackle than a dirty spark plug, a matter of but a few minutes work to change.

It may be that I am too enthusiastic, and that my troubles will come in a bunch. Well, let them! All I can say is that after months of service I am more than satisfied, and believe no doctor should be without a good reliable motor.

From the number of machines being sold this season and under process of construction, it is apparent that though the automobile will never supersede "Man's noblest friend," the horse, yet for general utility and added speed and convenience, its use has become an imperative necessity.

The coming International Automobile Show to be held in Toronto, March 31st to April 7th, will enable those interested in

automobiles to compare the latest makes and prices, as I believe nearly half a million dollars' worth of machines will be exhibited by manufacturers of the United States, England, France and Canada.

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### ITEMS OF INTEREST.

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**Physicians Desiring to Dispose of their Practices** will secure an easy way of doing so with a minimum amount of publicity, by taking advantage of the Canadian Medical Exchange, conducted by Dr. Hamill, 75 Yonge Street. He has been conducting this important department of medical affairs for twelve years, and the great majority of medical sales have passed through his hands during that time to the entire satisfaction of vendor and vendee. A partial list of his offers will be found among our advertising columns in each issue of this journal, the complexion of which, of course, changes from month to month.

**The Ontario Medical Association.**—The President again desires to call the attention of members of the Ontario Medical Association to the annual meeting for 1906. As was announced some time ago the meeting will be called at 8 p.m., Monday, August the 20th, the evening preceding the inauguration of the British Medical Association's meeting, and will take the form of a purely business session. The prestige of the greater meeting to follow should not diminish the sense of responsibility of the members to their local society. Such important business as the closing of the business of this year and the intelligent preparation for a successful meeting in 1907 demands a wide and sympathetic interest in the welfare of the Association.

**Toronto Hospital Bill.**—The first reading was given on March 10th to the bill respecting the Toronto General Hospital, which provides among minor amendments that there be twenty-five trustees, instead of five, as at present. They shall be appointed as follows, Government 8, subscribers 7, University 5, city 5. Power is given to expropriate land, while still retaining all its present powers. Should the trustees under the power of this act expropriate the block of land south of College Street, west of Elizabeth Street, north of Hayter and Christopher Streets, and east of University Street and any portion thereof, then those portions of Avenue Street, Avenue Lane, Centre and Christopher Streets, lying within said limits shall be closed and the fee therein shall be vested in the trustees.

# *The Physician's Library.*

## BOOK REVIEWS.

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*Movable Kidney.* A Cause of Insanity, Headache, Neurasthenia, Insomnia, Mental Failure, and other Disorders of the Nervous System; a Cause, also, of Dilatation of the Stomach. By C. W. SUCKLING, M.D. (Lond.), M.R.C.P., Consulting Physician to the Queen's, to the Children's, and to the Orthopedic and Spinal Hospitals; formerly Professor of Medicine and Materia Medica in the Birmingham School of Medicine; author of "Diagnosis of Diseases of the Brain, Spinal Cord and Nerves"; also of "Treatment of Diseases of the Nervous System," etc. London: H. K. Lewis, 136 Gower Street. 1905.

The title of this work is sufficient to suggest its scope and perhaps its quality. It is the statement of the views of a practitioner who possesses a very limited field of vision when he seeks to connect cause and effect. He finds that many patients suffer from the innumerable symptoms which we at present classify as indicating the condition called "neurasthenia." On examination the patient is found to have a movable kidney. *Ergo* neurasthenia is caused by the movable kidney. He even goes further and operates on the movable kidney; incidentally, it is to be assumed, he lays his patient up in bed for a few weeks with suitable diet and proper hygienic surroundings; the patient's condition is improved or possibly cured. With great profundity of thought and argument he concludes that the stitching up of the movable kidney has cured the neurasthenia. So also is it possible, in the view of our author, to cure such maladies as insanity, headache, dilated stomach, etc.

It is hardly necessary to occupy space in discussing the work seriously; it embraces a style of argument which unfortunately is becoming too common. So common, indeed, that we find our author appealing with some effect to the "neurologist" and the "gynecologist" as supporting his theories. His impressions from reading current literature apparently being to the effect that the specialists in the two departments of medicine referred to were unanimously committed to the support of his theories. Fortunately there are exceptions even among neurologists and gynecologists.

Possibly our author has done good. If he can succeed in

attracting attention to the movable kidney as a cause of these grave disorders and can further succeed in persuading patients and practitioners that these disorders can be cured by a simple operation, then he has succeeded in substituting an operation of very minor moment for one of a much more grave character. The stitching up of a movable kidney is a very much less serious matter than removal of both ovaries. The arguments for the latter operation would be as strong as the former in the minds of individuals of the mental bias of our author, and it is to be hoped that the author of the present work may succeed in convincing the large group of practitioners who suffer from the same obliquity of vision as he does, that it is only necessary to stitch up the kidney and not necessary to sacrifice such an important organ as the ovary. By this means many of the disastrous results which have been manifest in former years as the result of much unnecessary mutilation will possibly be averted. To that extent good may be accomplished by the publication of this book and possibly by easy stages it may be possible to finally lead these docile members of our profession to the belief that it is really not necessary to conduct any major operation at all in a disease which is general in character and in the majority of instances has no local cause. A. P.

*The Practice of Medicine.* A Text-Book for Practitioners and Students, with Special Reference to Diagnosis and Treatment. By JAMES TYSON, M.D., Professor of Medicine in the University of Pennsylvania, and Physician to the Hospital of the University; Physician to the Pennsylvania Hospital; Fellow of the College of Physicians of Philadelphia; Member of the Association of American Physicians, etc. Fourth edition, revised and enlarged, with 200 illustrations, including colored plates. Philadelphia: P. Blakiston's Son & Co., 1012 Walnut Street. 1906.

Professor Tyson's text-book on the practice of medicine is a valuable addition to the library of a physician. Representing, as it does, the personal observations on disease of an acute observer, made in particularly rich fields of hospital and private practice during a period of some thirty-five years, its perusal produces a most favorable impression on a medical reader.

Professor Tyson has from his long experience been able to demonstrate the soundness of the opinions he expresses in this work. Even when he differs with the opinions of other authorities his own opinions are couched in studiously moderate language.

We look upon the work as a safe and trustworthy text-book, an authoritative work on the many subjects falling within the scope of the practice of medicine.

Professor Tyson has been fortunate in enjoying the assistance



of able collaborators, who have aided him in bringing this great work to its present state of perfection. It is unnecessary to allude to the popularity of the work, the first edition having been brought out in 1896, and the work before us being a copy of the fourth edition. An important addition to the present edition is the section on animal parasites, which has been revised by a colleague of the author, Dr. Allen J. Smith. A considerable number of illustrations have been introduced into this section, which serve to make the text more easily understood.

The work is well printed and bound, and in every way is deserving of professional approval and patronage. J. J. C.

*The Prevention of Senility, and A Sanitary Outlook.* By SIR JAMES CRICHTON-BROWNE, M.D., LL.D., F.R.S., Lord Chancellor's Visitor in Lunacy. London and New York: The Macmillan Company. 1905.

"The Prevention of Senility" was an inaugural address delivered before the Preventive Medicine Section of the London Congress of the Royal Institute of Public Health, July 20th, 1905.

"A Sanitary Outlook" was a presidential address at the London Conference of the Sanitary Inspectors' Association, Aug. 17th, 1905.

These two addresses are well worthy of the perusal of all interested in vital economy, and as length of days is the best sanitary outlook, the two addresses make a suitable combination for a very pleasant and useful little book. E. H. A.

*A System of Medicine.* By many writers; edited by THOMAS CLIFFORD ALLBUTT, M.A., M.D., LL.D., D.Sc., F.R.C.P., etc., Regius Professor of Physies in the University of Cambridge; Fellow of Gonville and Caius College; and HUMPHREY DAVY ROLLESTON, M.A., M.D., F.R.C.P., Physician to St. George's Hospital and to the Victoria Hospital for Children; sometime Fellow of St. John's College, Cambridge. Volume I. London: Macmillan & Co., Limited. New York: The Macmillan Co. 1905.

It is true that the life of any system of medicine is, at the best, but limited. Realizing this, the authors of this work have wisely decided not to wait till their previous one has become stale and out of date, but to commence now their process of revision and publish one volume each year, and by that means keep their system of medicine to the forefront, in order that it may be looked upon truly as one of the representative works on the great and ever-widening subject of Practice. Volume I. shows not a mere passing revision, as too many books are subjected to, but a very

careful re-editing almost throughout its pages. The first article, entitled "The History of Medicine," is by Professor Albutt himself, assisted by Dr. Payne, of St. Thomas' Hospital. It is delightfully written, and a thesis of no mean ability. Two chapters drew our attention in particular, "The Hygiene of Youth," by Dr. Clement Dukes, of Rugby Hospital, and "Old Age," by Sir Hermann Weber (Royal Hospital for Diseases of the Chest, Ventnor), and Dr. F. Parkes Weber, of the German Hospital, London. Dr. E. Symes Thompson, of the Consumption Hospital, Brompton, contributes a most practical article on "Life Insurance," while our friend, Prof. Adami, of Montreal, contributes a well written chapter, entitled "Inflammation." Among other contributors are Sir Lander Brunton, Professor Woodhead, Dr. Eustace Smith, Mr. Jonathan Hutchinson, Prof. Wm. Watson Cheyne and Sir Dycê Duckworth.

*Operative Treatment of Chronic Constipation.* By W. ARBUTHNOT LANE, M.S., F.R.C.S., Surgeon to Guy's Hospital, and Senior Surgeon to the Hospital for Sick Children, Great Ormond Street. London: The Medical Publishing Company, Limited. 1904.

This paper by Mr. Lane deals with material published at various times in the *Clinical Journal* and *Lancet*, from June, 1901, to January, 1904. The author reviews the pathology, symptoms, causation and treatment of gastro-intestinal changes, associated with obstinate constipation. In his surgical treatment the author divides bands and adhesions, and where this is not sufficient he sidetracks the colon by cutting through the ilium about 6 inches from the valve, and inserting it into the sigmoid or upper rectum. We have not met cases requiring more than the division of bands and adhesions, but where such cases exist there can be no doubt but the more radical treatment advised by Mr. Arbuthnot Lane would be effectual and produce immediate results.

W. J. W.

*Food and Diet in Health and Disease.* By ROBERT F. WILLIAMS, M.A., M.D., Professor of Practice of Medicine in the Medical College of Virginia. Philadelphia and New York: Lea Bros. & Co. 1906.

This handsomely bound little volume of nearly 400 pages is arranged in somewhat of a different way with regard to grouping of the individual foods than is usual; instead of being grouped as animal and vegetable, that is, they are arranged according to the predominating alimentary substances which they contain, and this distinguishes them better from the point of view of their prae-

tical uses in the body. The writer has drawn liberally on many of the standard works on dietetics. It might be difficult, perhaps, to write a book on this subject if one did not do so.

The chemistry of food, physiology of digestion, cooking and the proper use of foods in health, the quantity of food, proteid foods, carbohydrate foods and salts, together with the proper preparation of food, are all thoroughly gone into, as also the use of non-intoxicating as well as alcoholic beverages.

A very small portion is devoted to the feeding of infants and children, but what there is is so good that it makes one wish there was more of it.

Taking up the subject of food in disease, one is not struck by any great difference that may exist between what we find here and what we find in other writers. Perhaps we all get used to seeing the printed tablets, and they become more or less stereotyped in everybody's mind.

The latter part of the book contains a large number of very useful receipts, which are of the greatest value not only to medical men but to nurses. No medical man should be without this book if it was only to be used as a book of reference.

A. J. J.

*The Diseases of Infancy and Childhood.* For the Use of Students and Practitioners of Medicine. By L. EMMETT HOLT, M.D., Sc.D., LL.D., Professor of Diseases of Children in the College of Physicians and Surgeons, Columbia University, New York; Attending Physician to the Babies' and Foundlings' Hospitals, New York; Consulting Physician to the New York Infant Asylum, Lying-in-Hospital, Orthopedic and Hospital for the Ruptured and Crippled. With 241 illustrations, including eight colored plates. Third edition, revised and enlarged. New York and London: D. Appleton & Co. 1906.

The advances made in diseases of infancy and childhood during the last few years have made it desirable that the subject be thoroughly revised and the editions brought up-to-date. This has been done by Professor Holt in this the third edition of his well-known work.

An effort has been made to keep down the size of the new volume. This has been done by confining the work strictly to its legitimate sphere and in some chapters making reductions.

The principal changes from the second edition are in the articles on the examination of the sick child, hypertrophic stenosis of the pylorus, diarrheal diseases and dysentery, vaginitis, cerebro-spinal meningitis, mental defects, chondro-dystrophy, diphtheria and status lymphaticus. The work is of a convenient size, is concise as one could wish, yet covers the ground fully and will be

found invaluable either to the student as a text or the general practitioner as a reference. It contains 1,174 pages, including an index.

W. J. W.

*The Man of the Hour.* By OCTAVE THANET. Toronto: McLeod & Allen. Cloth, \$1.25.

The story begins when "Young Ivan," the hero, is the smallest and most lovable of boys. He is the son of a plain American, a "Captain of Industry," and a beautiful, poetic Russian princess, her heart on fire with love for the poorest of her countrymen. The hero chooses to live among the poor, and works out the problem of life amid ever-changing scenes. When he at length takes his dead father's place, he is a man indeed possessed of unfailing courage, the knowledge that is power, and the highest ideals. One pauses to wonder if the authoress looks upon her perfectly drawn character as a prototype of the American man of to-morrow, a composite evolution of the union of foreigner with native.

W. A. Y.

*A Manual and Atlas of Orthopedic Surgery.* Including the history, etiology, pathology, diagnosis, prognosis, prophylaxis and treatment of deformities. By JAMES K. YOUNG, M.D. Illustrated with over seven hundred photographs and line drawings, mostly from original sources. Philadelphia: P. Blakiston's Son & Co., 1012 Walnut Street. 1905. Canadian agents: Chandler, Ingram & Bell, Ltd., Toronto.

No work hitherto appearing upon orthopedic surgery has presented such a wealth of illustration and such sumptuousness in paper, binding, etc. It is a leader in the art of bookmaking.

The author, on his part, has undertaken a work almost encyclopedic in its range and, when all is summed up, has done his work well. Surgery, as it deals with deformities, is here set forth with considerable fulness of detail, in its earliest beginnings, its history, development and latest achievements.

The work is not without its defects. The specialist will miss the accuracy of definition, the sharpness of description, the perspicacity of language and the clearly expressed choice of methods which have proved themselves the best, which are so much prized by the surgeon who seeks for assistance in a time of doubt. The general practitioner will find many methods of treatment described and will be lost in the very wealth of illustration and the number of plans of treatment proposed, without giving the indication which he has a right to expect of the author as to the methods which have proved themselves most effective.

It is doubtful whether the term *rarus* should be used to signify two distinct elements of deformity which usually, it is true, are

found together but which frequently are found present separately. Would it not be better to confine the term *varus* to signify that condition of the foot where the inner border is concave and use the term *supinatus* to indicate the element of rotation so often co-existent? As an instance of inaccuracy in the use of terms (page 772) one may quote, "It demands in most cases a combination of operative, mechanical and orthopedic treatment" (referring to club-foot). Surely the term "orthopedic" should be quite enough to include both operative and mechanical treatment.

Notwithstanding minor defects, which it would be unreasonable to unduly accentuate, the author is to be warmly congratulated upon having given to the profession probably the most ambitious and successful presentation of orthopedic surgery which has appeared in any language.

B. E. M.

*The House of a Thousand Candles.* By MEREDITH NICHOLSON. Illustrated by Howard Chandler Christy. Toronto: McLeod & Allen. Cloth, \$1.25.

The interesting story of a young man's inheritance, full of incident from cover to cover, almost the whole gamut of a news-boy's scale of horrors, as he sings out his evening paper, are depicted in a fresh and crisp style. "A wreck, a murder, a fire alarm—whichever ye like—have a paper, sir?" W. A. Y.

*New Methods of Treatment.* By DR. LAUMONIER. Translated and edited from the second revised and enlarged French edition by H. W. SYERS, M.A., M.D. (Contab.), Physician to Out-Patients, Great Northern Central Hospital. London: Archibald Constable & Co., Ltd., 16 James Street, Haymarket. 1904.

The author of this book has undertaken one of the most difficult tasks, namely, the description and discussion of the new remedies which are of known value. In the present day such a vast number of new remedies are brought constantly to the notice of every medical practitioner, both through the journals and also very largely by the ever-present drug agent, who is always ready to leave samples—that it makes it exceedingly difficult for the average practitioner to choose the valuable from the worthless. The work is most scholarly in its style, and as dealing with this particular part of medicine is one that should be read by all those who wish to be, and whose position requires them to be, up-to-date.

The author also deals not alone with drugs, but with the serums and the question of neurons and nervous re-actions. The well-recognized, or classical methods, as also those which are known to be imperfect, have not been introduced into this work. One feature, however, which perhaps distinguishes it from other books

of a similar character, is that at the beginning of each chapter there is a summarized account of the pathological physiology and pathogeny of disease of such a nature that the mechanism of therapeutic action may be deduced from a knowledge of the functional operations which give rise to it.

A. J. J.

*Materia Medica, Pharmacy and Therapeutics.* Including the Physiological Action of Drugs, the Special Therapeutics of Disease, Official and Practical Pharmacy, Minute Directions for Prescription Writing and Avoiding Incompatibility; also the Antidotal and Antagonistic Treatment of Poisoning. By SAMUEL O. L. POTTER, A.M., M.D., M.R.C.P. (Lond.); formerly Professor of the Principles and Practice of Medicine in the Cooper Medical College of San Francisco; author of the "Quiz-Compends of Anatomy and Materia Medica," "An Index of Comparative Therapeutics," several articles in Foster's "Practical Therapeutics," and "Speech and Its Defects"; late Major and Surgeon of Volunteers, U. S. Army. Tenth edition, revised and in great part rewritten. Philadelphia: P. Blakiston's Son & Co., 1012 Walnut Street, 1906.

This, the tenth edition, has been practically rewritten and corrected to conform with the U. S. Pharmacopeia. Over one hundred new articles have been inserted—much obsolete literature has been left out. The nomenclature of the U. S. Pharmacopeia has been strictly followed in the sections on materia medica and pharmacy. Many preparations of the British Pharmacopeia have been mentioned. A good useful book in every department.

A. J. H.

*The Surgical Treatment of Chronic Suppuration of the Middle Ear and Mastoid.* By SEYMOUR OPPENHEIMER, M.D., Otologist and Laryngologist to Gouverneur Hospital and to Mount Sinai Hospital Dispensary. Philadelphia: P. Blakiston's Son & Co., 1012 Walnut Street, 1906. Pp. 425.

The first part of this work deals with the affections of the middle ear and their operative treatment as effected through the external auditory canal. A chapter is devoted to the anatomy of the part, another to preparation of the patient for the operation. The treatment of granulation tissue in the middle ear, the so-called polypi, is specially full and satisfactory. The difficult question as to when removal of the ossicles is indicated is debated, and the conclusion reached that "in all cases of chronic suppurative otitis media, conservatism should demand this operation prior to the performance of the mastoid operation."

Caries of the tympanic walls is next considered, and those cases where there is constant or intermittent suppuration, but

good hearing, with no immediate indication for operative procedures.

Part II. takes up the mastoid operation. Naturally a good deal more space is devoted to a consideration of the anatomy and landmarks. The mastoid operation is dealt with under two heads, the simple operation—that is, the opening of the antrum through the mastoid process—and the radical operation, in which the tympanic cavity, attic, antrum, and mastoid, are all thrown into one cavity. The radical operation, while not always necessary, gives greater security, and has practically supplanted the simple operation. The great drawback is that the operation is but the beginning of the treatment, for the later dressings and care of the parts are just as essential to success.

The paper, print and illustrations—some forty-six half-tone plates—and the soundness of its surgical teaching, make this a most valuable addition to one's library. J. M.

*St. Cutlbert's.* By ROBERT E. KNOWLES. New York, Chicago, Toronto, London, Edinburgh: Fleming H. Revell Company.

Scotch talk, staunch Scotch characters, life centralizing around the kirk, death-bed scenes sketched minutely, love scenes inartistic with nothing left unsaid, here and there a lighter touch, even a smack of "a wee drap," and the odor of a peppermint "sweetie," make an odd contrast to the pervading gloom that hangs Scotch-mist-like over half of the pages. The work of a clever man, no doubt, but appealing strongly only to one class of readers, those who consider 'tis all of life to live a Scotchman and to die a Presbyterian. W. A. Y.

*Dose-Book and Manual of Prescription-Writing:* with a List of the Official Drugs and Preparations, and the more important Newer Remedies. By E. Q. THORNTON, M.D., Assistant Professor of Materia Medica, Jefferson Medical College, Philadelphia. Third edition, revised and enlarged. 12mo, 392 pages, illustrated. Philadelphia and London: W. B. Saunders & Company. Canadian Agents: J. A. Carveth & Co., Limited, 434 Yonge Street, Toronto. 1905. Bound in flexible leather, \$2.00 net.

A glance at the contents of Dr. Thornton's book fully explains its attainment of a third edition. In addition to the consideration of the official and the more important non-official preparations intended for internal administration, weights and measures, solubilities, and incompatibilities, attention is given to the grammatic construction of prescriptions, illustrated by examples. In revising the text for this edition Dr. Thornton has made it con-

form with the new (1905) Pharmacopeia, the radical change in strength or name of many chemicals, drugs and preparations already official, and the admission of many newer remedies necessitating the rewriting of a number of sections. We notice in the appendix an addition of much value—a table showing the change in strength of important preparations, and also a list of average doses for adults in accordance with the new Pharmacopeia. Dr. Thornton's Dose-book is, as it always has been, accurate and up-to-date.

A. J. H.

*A Text-Book of Human Physiology.* Including a Section on Physiologic Apparatus. By ALBERT P. BRUBAKER, A.M., M.D., Professor of Physiology and Hygiene in the Jefferson Medical College and in the Pennsylvania College of Dental Surgery; Lecturer on Physiology and Hygiene in the Drexel Institute of Art, Science and Industry. Second edition, revised and enlarged, with colored plates and 356 illustrations. Philadelphia: P. Blakiston's Son & Co. 1905.

It must be gratifying to the author and to the publishers to have the second edition follow so soon after the first.

The changes and additions are neither numerous nor lengthy. A small amount of new matter is introduced in the sections relating to the chemistry of the proteids, the chemistry of digestion, the movements of the intestines, the production of lymph, the nerve mechanism of the heart, and the physiology of vision. The added material makes these topics more complete and accurate.

We are sure the generous reception given to the first will be repeated with the second edition.

A. E.

*Differential Diagnosis and Treatment of Disease.* A text-book for practitioners and advanced students. By AUGUSTUS CAILLE, M.D., Fellow of the New York Academy of Medicine; Member and ex-President of the American Pediatric Society; Professor of Diseases of Children, New York Post-Graduate Medical School and Hospital; Visiting Physician to the New York Post-Graduate and German Hospitals; Consulting Physician to Isabella Home and Hospital. With 228 illustrations in the text. New York and London: D. Appleton & Co. 1906.

The presentation of "clinical experience" and not "therapeutical details" seems to have been the author's object in writing this book, and from a short and rapid run over one or two sections, we think that he has succeeded fairly well. The work consists of thirty-one chapters under the following captions:

Introduction: The Requisites of the General Practitioner, his



relation to the community and to specialism. 1. Technique of Diagnosis and the Clinical Laboratory. 2. General Therapeutics. 3. Pediatrics. 4. The Digestive System. Nutrition and Diet, Diseases of the Organs of Digestion, Gastrological and Proctological Memoranda. 5. The Circulatory System: Diseases of the Organs of Circulation, of the Blood, the Lymphatic System, Management of Dropsy and Effusion. 6. The Respiratory System: Diseases of the Organs of Respiration, Rhinology and Laryngological Memoranda and Formulary. 7. The Genito-Urinary System: Diseases of the Genito-Urinary Organs, Urological and Gynecological Memoranda. 8. Diseases of the Bones, Muscles, Joints, Orthopedic Memoranda. Remarks on Massage, Vibration, Dry Hot-Air Treatment. 9. Infective Fevers and Methods of Prevention and Disinfection. 10. Faulty Metabolism and Diseases of the Ductless Glands. 11. Neurological Memoranda. Remarks on Electricity and its Therapeutic Uses. 12. Dermatological Memoranda and Formulary. 13. Ophthalmological and Otological Memoranda and Formulary. 14. Anesthesia, Poisons and Antidotes, and Miscellaneous Disorders. 15. Keeping Case Records and Accounts. 16. Index.

*The Surgery of the Diseases of the Appendix Vermiformis and Their Complications.* By WILLIAM HENRY BATTLE, F.R.C.S., Surgeon to St. Thomas Hospital; formerly Surgeon to the Royal Free Hospital; Hunterian Professor of Surgery at the Royal College of Surgeons of England, etc., and EDRED R. CORNER, M.B., B.C., F.R.C.S., Surgeon-in-charge of Out-Patients in St. Thomas Hospital, and Assistant Surgeon to the Great Ormond Street Hospital for Sick Children; Erasmus Wilson, Lecturer at the Royal College of Surgeons, etc. London: Archibald Constable & Co., 16 James Street, Haymarket. 1904.

This work is practically a compilation of the opinions held by the various writers on this subject written from the practical surgeon's standpoint. The literature on this subject is so extensive that it necessarily must have been a work of some magnitude to consult the different writers, monographs and journals, etc., but this has evidently been done, and then we have the opinion of the practical surgeon before whom a constant stream of these cases is daily passing.

The views of the physician and pathologist have as far as possible been summarized, and are presented to the profession from the surgeon's standpoint in such a way that they shall be of the most practical value.

The advisability of amputation by the clamp method is strongly discussed. There is further a section on acute abdominal

disease, carcinoma, tubercle and other diseases of the appendix, and a chapter on life insurance. This latter is unusual in any work of this kind, and indeed the writer points out the fact that as seventy-five per cent. of the fatal cases occur in first attacks, there is no way in which life insurance companies can protect themselves except in a general way. All cases are divided into two classes—those that are not operated on, that is, medical cases, and those that have been operated on, or surgical cases; and as the general opinion is that in medical cases further trouble generally results, these writers naturally lean to the theory of early operation.

The whole subject is thoroughly discussed, and put in a very forcible and clear manner. A. J. J.

A book of interest to the medical profession particularly, now in the press, is entitled "On Leprosy and Fish-Eating," by Jonathan Hutchinson, who was formerly president of the Royal College of Surgeons. It comprises statements as to the history of leprosy, its nature, its prevalence in different countries, and the conditions under which it has disappeared from many. Facts are brought forward to show that it is not ordinarily contagious, and that its real cause is the use as food of badly cured fish. There are chapters on the influence of sex in relation to leprosy, of religious creed, and poverty. An account is given of the author's tours in South Africa and India, and the measures for the suppression of leprosy are fully discussed. The volume contains maps and illustrations. Publishers: Archibald Constable & Co., Ltd.

#### PAMPHLETS RECEIVED.

"Thirty-Eighth Annual Report of the Inspector of Prisons and Reformatories of the Province of Ontario, being for the year ending 30th September, 1905." Printed by order of the Legislative Assembly of Ontario. Toronto: Printed and published by L. K. Cameron, Printer to the King's Most Excellent Majesty. 1906.

"Thirty-Eighth Annual Report of the Inspector of Prisons and Public Charities, upon Lunatic and Idiot Asylums of the Province of Ontario, being for the year ending 30th September, 1905." Printed by order of the Legislative Assembly of Ontario. Toronto: Printed and published by L. K. Cameron, Printer to the King's Most Excellent Majesty. 1906.

"Thirty-Sixth Annual Report of the Inspector of Prisons and Public Charities, upon the Hospitals and Charities, etc., of the Province of Ontario, being for the year ending 30th September, 1905." Printed by order of the Legislative Assembly of Ontario. Toronto: Printed and published by L. K. Cameron, Printer to the King's Most Excellent Majesty. 1906.

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## *Original Contributions.*

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### PRELUDES TO INSANITY.\*

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BY R. W. BRUCE SMITH, M.D.,

Inspector of Hospitals and Public Charities, Toronto.

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It is gratifying to know that in this age of modern scientific methods the interesting field of psychology has not been neglected. Insanity in its various forms and phases is no longer studied and classified from the symptomatic phenomena it presents but rather from a physiological and pathological basis. It is along this line that our hope for future development in psychiatry must lie. Much of the obscurity in the pathogenesis of nervous, and especially of mental diseases, is largely to be explained by the simple fact that the brain and the nervous system have been studied, altogether too much, as something apart from the other portions of the body—as something beyond the jurisdiction of the great fundamental pathological processes which operate on the whole organism. The mists of prejudice and empiricism are slowly lifting before the sunlight of modern research, carried on by investigators into the etiology of insanity. They are gradually removing the obstacles that have so long paralyzed the development of mental medicine and are demonstrating conclusively that the study of psychology must be conducted along the same lines as pursued in the investigations of other branches of medicine. While we recognize that heredity is the great predisposing cause of insanity, the physical aspect of mental disease must never be lost sight of. The study of the sympathetic relations between functional and organic disorders of the body and mental disturbances, has only

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\* Read before the Ontario Medical Association, June, 1905.

emphasized the fact that there is no distinct line between the disorders of a *corpus morbosum* and an *animus morbosum*. Hence, in accounting for the manifestations of insanity, not only is a study of the structure, function and nutrition of the brain necessary, but our inquiry must proceed further and include the entire nervous system and all the organs and functions of the body. For these must all act in harmony and as an entity with the brain and nerve centres. As a result, then, of this distinct relationship there is with every organ and structure a distinct connection with the brain and hence all physiological, as well as pathological conditions, possess and exercise an influence on that organ.

Griesinger, Bouchard and others have demonstrated the necessity of studying all diseases of the nervous system as one inseparable whole, of which insanity is only a portion. There is no doubt that the brain is involved like any other organ of the body in the general toxic or somatic diseases and many of the insanities are but the expression of the later disturbance of the functions of the brain, dependent upon changes in the nerve cells, secondary to abnormal conditions in other portions of the body. The relations of the dependence of changes in the nervous system upon general somatic diseases is often thoroughly masked, and the lapse of time between the events may be such that the relationship between the two is often overlooked. The importance of appreciating the fact that many sensory, vaso-motor symptoms may be preludes to an attack of insanity is now generally recognized. While the precise nature of the pathogenesis of the various insanities is far from being perfectly understood, we do know that the recognition of early symptoms may often enable us to anticipate and possibly prevent the later appearance of the phenomenon known as insanity. The experience of any neurologist can furnish examples of cases with an unusual form of headache, which if not arrested, might lead to an attack of mania. We are well acquainted with the change in disposition, the restlessness and irritation that occur in an individual affected by the slightest physiological disturbances, as witnessed in the depression of the dyspeptic or the exaltation of the intoxicated. We recognize that physiological disturbances, accompanied by pathological changes, as manifested in the menopause and puerperal conditions, stand as strong etiological factors in the production of insanity. Too often, I fear, cases are certified as insane, and the attack described as a sudden outburst, with cause quite unaccounted for, when if the real clinical history of the case could only be known there would be, though perhaps greatly disguised, a long train of symptoms, sensory and motor, sleeplessness, change in disposition, and other facts indicating in autointoxication, or some other physical disturbance, a causative relation to the symptoms of insanity.

To have a healthy working mind we must have the sensory apparatus working in a normal condition. If we have a sensory system that is debilitated from any cause, the mental centres will not be long in showing the influence of the disturbance. How often have we seen marked instances of that in cases of melancholia, that, when diligently inquired into, afforded a history of oft repeated severe nerve storms. If we could understand the true etiology of the minor nerve disturbances that so often receive slight recognition in the earlier stages of melancholia, and remove the cause we would accomplish much, that we must now confess, is left until the storm is too fully developed. We know that many of these sensory symptoms are often transitory, and not of grave significance. Hence, probably, the reason why they are regarded as slight and trivial ailments. We so commonly meet with cases of melancholia in which our patients, sometimes seemingly well-nourished, have been subject at first to headaches, weary, painful feelings in the back of the neck and down the upper portion of the spine when wearied with little exertion. These sensory symptoms have continued until terminating in mental depression. Then when the mental trouble is pronounced the bodily pain seems to have passed off, only to return, in some instances, when the convalescence is established. Indeed the recurrence of the sensory symptoms comes to us as a pleasing signal of the light breaking in and scattering the clouds of depression. The melancholia, which is sometimes a sequela of influenza, is often marked in the early stages by these symptoms of long-continued headaches, or other sensory disturbances. If we could explain their exact nature, and their relationship to the mental symptoms which so often follow them, much would be accomplished in a field that to me is very inviting and interesting. If we are to accept these disturbances as due to toxic influences, is the toxemia merely a secondary and intermediate stage and not the real primary cause? If so, we must look beyond the toxemia to some great first cause. The uric acid theory does not afford us a satisfactory basis on which to account for all these manifestations. We no longer explain headaches and similar disturbances of the sensory apparatus as vaso-motor in origin, but are rather inclined for the real cause to attribute them to a failure of nutritive and dynamic energizing of the higher cortical cells. There is probably given to each neuron an innate power of building up its stores of potential energy (anabolism), and of liberating these stores in a dynamic form (katabolism), these two powers being balanced so that the neuron shall neither become, as it were, too full nor too empty. These powers in the sensory neurons are influenced, and probably regulated to a great extent from without by much action, by the innumerable and constant afferent impressions from the skin and viscera, by direct interference through other

neurons, and finally by the blood current. And any disturbance of this complicated series of conditions in a person of a sensitive organism may, no doubt, cause the danger signal of pain to be put out. In short, to be "neurotic," or "unstable" mentally, indicates a lack of power to resist the influences from within or without that are adverse to life or health. The same influences produce different effects in people. Exposure to cold braces one man and brings on bronchitis in another. Difficulties in life will in one individual stimulate a spirit of resistance, and in another break down the spirit and cause mental depression. For mental development we must have constant healthy stimuli on the sensory organs acting first on the great sensory centres in the brain, and then their transmission in proper form to the receptive mental centres. Mind arises through sensations at first—no sensation, no intelligence—and a healthy sensory system is most requisite in order to have the great mental functions satisfactorily performed. Does this not then explain why melancholia so often follows a condition where the sensory apparatus is weakened, poisoned or starved? The mental areas are only reached through the sensory. Why does sunshine produce cheerfulness, or fresh air a feeling of organic comfort, or muscular exercise exhilaration? The first step in the process is the reception of the sensory impression, the second is the mental effect. Sensory disturbances arise first—disturbing impressions are sent to the mental cortex, and the mental manifestations come as natural psychological sequences. The sensory areas are the gateway to the mind, and so must bear the first imprint, must suffer first. An oversensitive constitution is commonly the basis of the melancholic diathesis. This, of course, means that the sensory impressions in such a case are strong and overpowering. By keeping before us the necessary relation between the sensory and mental activities of the brain, many of the clinical facts of an attack of melancholia will be better understood, and some suggestions gleaned for its treatment, and perchance, light gained that may serve useful in guiding us to do something for its prevention. A physician approaches a case of illness by inquiring into the food supplies and how the body was digesting them. Our duty as physicians is to test the mental food supplies. Any departure then from normal sensory functions, especially in those who are predisposed to insanity, is worthy of attention.

There are also motor disturbances which often may be considered as preludes to mental symptoms. I have met with many cases where the friends of the patient have related that one of the earliest manifestations has been general muscular unsettledness. We are all familiar with the changes in facial and eye expressions due to the fact that the muscles upon which these changes depend are highly innervated. These muscles represent emotion

and mental action with marked peculiarity and distinctness. The reactivity and power of co-ordination with each other is commonly changed in the incipient stages of mental disease.

Sleeplessness is often noticed and spoken of for weeks before there is a suspicion that the case is pointing towards mental collapse. While we cannot accurately describe the physiology or psychology of sleep, we do know the absolute necessity of brain rest to maintain healthy mentality. The vascular theories do not afford us an explanation of either sleep or sleeplessness, and we must look to the cortical cells themselves for an explanation. Insomnia must be due to some disturbance between anabolism and katabolism in the mental area. When a patient complains of persistent sleeplessness we may well suspect the approach of further indications of a nerve storm well worth guarding against.

At least fifty per cent. of the patients entering our institutions for the treatment of mental disorders have a history of nutritive and digestive troubles. The lack of activity in assimilation and elimination seems unmistakably a factor in contributing to the toxic condition, which finds expression in the mental symptoms. Obstinate constipation and distressed feelings in the epigastric region are common to nearly all cases of melancholia, and we cannot doubt that intestinal putrefaction with the formation of complex products of bacterial fermentation sustains a causative relation to many distressing cases of mental disease.

The modern teachings of Salmi, Krafft-Ebing, Ford Robertson and others, supporting the toxic theory of intestinal infection, are each year finding greater favor among careful observers. The progress which has recently been made in bacteriology and physiological chemistry has gone far towards demonstrating that the great majority of the processes of disease in general are due to toxic elements in one form or another. May we not then quite reasonably look to the general organism to discover along the lines of modern pathology a bacillus or a toxin which may originate, directly or reflexly, the conditions in the insane? The future brightens with a hopeful and cheering prospect that the application of this toxic theory of diseases to the nervous system is destined to clear away much of the present vagueness and mystery of the causative agents and pathogenesis of mental diseases. I am convinced from the light of my own experience that many cases of mental disorder might be prevented if the early symptoms of digestive and nutritive derangements could be corrected. The relief experienced by the regular and systematic cleansing of the alimentary canal, together with prescribing an appropriate diet, has warded off more mental distress than we are at all aware of. We have all noticed in the cases undergoing treatment that as soon as digestion and elimination are restored and maintained in a normal condition that our patients gain in flesh, and that increase in weight affords grounds for a cheering prognosis.

In the insanity of young women the danger signal is often particularly noticeable in menstrual derangements. Many cases have a history of amenorrhea dependent upon some physical disorder. While such cases often make good recoveries there is little reason to doubt that if such patients had submitted themselves in the earlier history of their trouble to their family physician their later symptoms might have been arrested. That there is a kinship between hysteria and mental disease is now generally recognized, and so often have I found the mental element sustained an intimate relation to some former manifestations of hysteria that I feel disposed to express a warning to those who say, when called to such a case, that it is "only hysteria."

We know that oftentimes varied forms of circulatory disturbances may be detected in the early history of mental cases. Cardiac palpitation, fainting fits, alterations in pulse rhythm, lack in capillary circulation, are common. With the vaso-motor disturbances, especially in women approaching the climacteric period, the flushings, sensations of giddiness, etc., we are all familiar. The blood changes, I must confess, are as yet too imperfectly understood to make any definite statement in regard to their presence in the early stages of mental disease. Dr. Lewis Bruce has reported some interesting observations from which we are told that after a patient has suffered from certain forms of mania there is a persistent leucocytosis, and that if such a patient relapse there is a marked fall in the leucocytosis and especially in the polymorphonuclear cell percentage prior to the onset of the attack. McPhail tells us that there is no evidence to show that anemia is in itself a cause of insanity, yet an anemic condition of the blood is, undoubtedly, in many cases intimately associated with mental diseases. All observers agree that there is a marked deficiency of red cells and hemoglobin, especially in cases of melancholia.

In regard to paresis, and the special features of a case that presents indications of that disease, it can scarcely be within the scope of this paper to deal. Whether we agree with the theory of Ford Robertson and others that paresis depends upon the occurrence of a general toxic condition, the exact nature of which is still obscure, or that syphilitic infection is the sole cause to which general paralysis is traceable, we cannot fail to see in the history of every case, opportunities which might perchance have been taken to ward off the advance of the toxic element which, when once it has gained a foothold, seems to disdain our best therapeutic measures.

We are all well aware that it is an extremely difficult matter to define the border line between sanity and insanity. Urquhart tells us that we might as well ask one to chalk off the foundations of a rainbow as to ask when a man becomes insane. I have fre-



quently been puzzled in reading the history, as outlined by the family physician, and particularly his answer to the question as to the duration of the insanity. Too often the answer is vague and unsatisfactory. Often one event or experience is cited, while if the real facts were given we might learn that the mental symptoms were merely the culmination of a long train of pernicious influences in a person already predisposed by heredity and environment to mental disease. The alleged causes are by no means invariably the real ones in the development of insanity, and the clinical facts brought out rather indicate preliminary symptoms that have been passed over unnoticed by the friends of the patient.

An attack of mental disease cannot be regarded as a simple or localized phenomenon. There is a harmony of action existing between the brain and the nerve centres in the cord and the special ganglia of the organic systems of the body. The sensory apparatus often presents the first indications of degeneration. The mental cortex is apparently the centre of the organism. The higher the centre the greater do we find the power of resistiveness. If the defences are weak, as in the great number whose history is blighted by the taint of heredity, the natural resistiveness is noticeably weakened. It is for this class especially that the importance of the early recognition of premonitory symptoms appeals to us, for in those not naturally predisposed to insanity many of the symptoms to which I have called attention occur without any mental attack. The element of heredity so often prevails that the importance of careful study and attention to the preliminary symptoms, especially the manifestations of disturbance in the lower nerve centres, indicating that a storm is approaching, cannot be too strongly urged. The progress in our knowledge of mental diseases is certainly pointing more clearly to the fact that all the varied phenomena that we now know as insanity should be regarded as merely an expression of departure from a normal condition in which the whole nervous system is concerned.

We cannot shut our eyes to the fact that insanity is on the increase and that if we are to combat that advance success must be sought by adopting prophylactic measures. To prevent insanity were better than to cure it, which, we know too well, is often impossible. The task may indeed be a difficult one in which to accomplish anything like a measure of success, when we are so often brought face to face with the baneful influences of heredity. Even, however, with that seemingly insurmountable barrier in our pathway, we may, I am persuaded, do much, not only by discouraging its propagation from generation to generation, but, by an early recognition of those symptoms which so often are a prelude to insanity, may in many instances turn aside the current which points towards a condition we are all gratified to see our patients escape.

**SUBCUTANEOUS INJECTIONS OF OIL INCREASE CELL  
ACTIVITY OF THE BODY—WITH ESPECIAL  
REFERENCE TO THE TREATMENT  
OF CONSUMPTION.**

BY THOS. BASSETT KEYES, M.D., OF CHICAGO.

*Theories of Immunity.*—Let us now consider some of the theories of immunity and later see how digestion of fats and injections of oil meet these theories, as they do in many particulars.

In all serum therapy in which experiments have been vigorously carried on since Koch, in 1882, published his first article relative to his discovery of the germ, it has been decided that such serums, should such a one be discovered to prevent tuberculosis, will not act so as to destroy the germ directly, but in a secondary way by stimulating to increased energy the white corpuscles of the blood, or, as Buchner puts it, that perhaps in the white corpuscles the defensive power of the blood (alexin) originates, while Metschnikoff believes their action may be due to increasing phagocytosis. How often the blood in a state of health prevents the growth of disease germs in a similar way no one would be able to compute, but it is known that even germs of the most severe diseases may be found in the secretions without having excited the disease of which they are characteristic, and it is this power which in itself constitutes immunity.

The lateral chain theory of immunity formed by Ehrlich, in 1897, has been looked upon as an hypothesis of great value in explaining natural and acquired immunity, it being based upon the specific action of toxins, a distinct toxin being formed for each substance eliminated from the body, being a bacteriolytic serum stimulated by the presence of one kind of germ or pathological substance, and being devoid of action upon another. Ehrlich also founds his lateral chain theory upon the mechanism by which the cells are nourished, this cellular protoplasm being very complex, with many combining functions, or "lateral chains," carried on by "receptors" of various forms, and according to its peculiar form is able to secure by attachment the substances called "haptophores," which it can use and for which it is said to be particularly adapted. The receptors formed for the purpose of taking up nutritious haptophores may also take up poisons and destructive haptophores as of pathological germs which have gained access into the system. Should this be the case, according to the hypothesis, the pathological germs may stop the nutrition of the cell and bring about its destruction; on the

other hand, should the pathological substance not attach itself in a quantity sufficient to destroy the cell, it forms new receptors for taking up nutrition in, that its life may be maintained. Through repeated attacks of pathological substances (pathological haptophores) the cell, in order to maintain itself, grows new receptors greatly in excess, which are finally liberated into the plasma, and are capable of uniting with haptophores, either pathological or nutritious, and being separated from the cell form products of immunity, and thus animals become immune from certain poisons and pathological conditions because their cells either lack the appropriate receptor or possess an unlimited number of them. This hypothesis is accepted as accounting for natural and acquired immunity, study and observation showing that lowered vitality of the individual lowers the immunity. As pointed out by Prof. Welch, in his Huxley lecture, it was interesting to see that this theory, propounded for the purpose of explaining immunity, like the other great theory of phagocytosis, has the mechanism of cellular nutrition as its basis.

*How Fats Assimilated from the Intestines and Oils Injected Subcutaneously Meet the Great Theories of Immunity, and How They Cure the Disease.*—When fat is taken into the intestine, it is split up into oils and assimilated mechanically by absorption through the villi, the white blood cells being in readiness to absorb them and being particularly abundant at the villi, after a hearty meal. The process of assimilation of fats is not agreed by all observers, and, therefore, not exactly understood, but that it enters the blood in an emulsified or solid form, and under certain conditions is deposited directly in the tissues, is assented to. With many tubercular patients the fat is not digested, but passes away with the stools.

In subcutaneous injections of oil, we use an oil which, because of its purity, needs no straining, and not being in the form of fat tissue, needs no splitting into oil globules by the intestinal juices. The oil injected under the skin, therefore, enters the blood in a way somewhat similar as if it were strained through the villi of the intestine. Let us notice what happens when a subcutaneous injection of oil is given. First we observe a puffing up of the skin, on account of its being raised by the oil injected, and this swelling corresponds exactly to the amount of oil injected. A rosy circle, several inches in width, at once takes place. This active hyperemia, showing the blood at work, and in a period of about three hours 20 c.c. of oil will have entirely disappeared, leaving no trace of where it was injected. It has been absorbed, and has gone to make new tissue and give nutriment to the blood.

*Subcutaneous Injections of Oil Produce Immediate Growth of Blood Cells.*—An examination of the blood after an injection shows an increased growth of its cellular constituents, both in

number and size. This meets the theory of immunity as to phagocytosis; it also can be applied to the theory of immunity devised by Ehrlich in that oils either assimilated from the intestine or from subcutaneous injection enter into the circulation. Now, on account of the increased amount of nutrition in the blood, the cells must develop more receptors to receive the nutrition or haptophores, and on this account receptors would be as necessary to grow in excess, and thus be greater in number to combat with pathological germs and to supply cell nutrition.

The peculiarities of the body juices of immunized animals, and the formation in them or presence of antitoxins, amboceptors, and other antibodies, depend upon the separation of the unnecessary receptors from the excessively stimulated cells and experiments with the toxine antitoxine reaction and the amboceptor reaction indicated that these separated receptors are able to continue their combining functions in fluids containing them. The complementary body or solvent of foreign and pathological cells is not accounted for in Ehrlich's theory, and of this we are left in doubt, but is thought to be a property of the blood, rather than of an antitoxine injected.

It has not been my intention to claim that oil injected is a true antitoxin against tuberculosis, but that it acts as such in part according to the theories of immunity cannot be denied, and the digestion of fats and oils by the intestine shows why some people are naturally immune from many diseases and particularly of the disease tuberculosis. Clinically it is proven that when fats and oils can be digested by the tubercular patient that they improve rapidly from the disease, that the people who habitually eat large quantities of fats never have tuberculosis, and if they do occasionally it is because the fat is not assimilated; and that subcutaneous injections of oil form the most valuable part of the plan of the treatment of tuberculosis, being perhaps as near a specific for the disease as anything is possible to be.

*Outdoor Life Promotes Appetite and the Eating of Fats.*—Outdoor camp life promotes appetite and the eating and digesting of fats. With these facts in view, some five years ago I established an out-of-door camp for the treatment of tuberculosis in Northern Wisconsin, and was one of the first to recommend tent life for consumptives at the first meeting of the American Congress of Tuberculosis, at which time it received considerable adverse opinions, but which is now very generally advocated. It has proven of great value in the treatment of tuberculosis, inasmuch as it promotes assimilation of food, it strengthens the corpuscles of the blood through the pure air breathed and the stimulation of the sun, the blood is better enabled to take up nutrition and use it in replacing diseased tissues.

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# *Selections, Abstracts, Etc.*

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## NOTES ON NON-OPERATIVE GYNECOLOGY.\*

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ALTHOUGH the subject of this paper is non-operative gynecological work, I trust that I shall not be suspected therein of desiring to minimize the operative side of such practice. During the twenty-five years of my professional life I have seen much of surgery in diseases of women, and I have always held and taught that where an operative procedure is indicated, and there is neglect to give the patient the benefit of such procedure, the gynecologist in charge is recreant to duty.

In the early days of my practice the operative craze was in the air. To operate with a promise of accomplishing so much at a rapid rate was very attractive, and unless there were decided counter-indications, the patient was urged to accept the radical rather than the conservative method of treatment. The patient was assured that she would avoid a long, tedious experience, and the surgeon was pleased at the prospect of quick work. The routine and unending patience required to restore a gynecological patient to health and comfort had small credit in those days. Many cases gave brilliant results. Many others, although operated upon after the most approved methods and under strict aseptic and antiseptic precautions, were disappointing. Individual idiosyncrasies, unexpected local involvement, and systemic conditions modified the expected result.

The pendulum began to swing back, and each individual case became a law unto itself.

To-day, the most frequent division of gynecological cases that comes to us is those that must be operated upon to save life, and those that may be, to save time and a long disability.

In placing before our patients the question of operative interference, with its probable advantages and possible disadvantages,

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the working woman will, as a rule, elect the operation, for time means much to her. But as women rise in the social scale they are less ready to embrace operative interference, except as a last resort, but are willing to spend time and means indefinitely if there is prospect of ultimate recovery.

No experienced specialist will for a moment question the propriety of early operative interference, where possible, in most pelvic or abdominal tumors, solid or cystic. I have usually excepted small fibroids, so situated as not to give pressure, and of non-hemorrhagic nature, with a warning to the patient of their possible rapid development, and a caution to be prepared for immediate operation should unfavorable symptoms arise. However, there is a class of fibroid cases where the symptoms appear serious, but where they will soon yield to non-operative measures, and defer indefinitely the question of operation. The following case illustrates this class:

Now travelling in Egypt is a patient who considers herself perfectly well. Five years ago, at the age of 48, she came to me with a history of profuse and painful menstruation, lasting six, eight, and ten days. She had marked gastric and intestinal disturbances, and more or less constant pelvic distress, which became more pronounced at each menstruation. Leucorrhea was present during the intermenstrual period. She was much depressed. There was a history of gradual enlargement of the abdomen. On examination it was found that while the cavity of the uterus measured only three inches, there were multiple fibroids reaching half way to the umbilicus. One was pedunculated, the size of a tangerine orange, and had dropped down into the posterior cul-de-sac. It had become impacted there by development, and was extremely sensitive. In the knee-chest position, I was able with some effort to dislodge it, and with a properly-adjusted tampon to keep it out of the pelvis. An operation was advised, but while the patient and her husband were considering the matter, she was made so comfortable with palliative treatment that they elected to try that method for a time. Ergot and later compound viburnum tablets were taken to aid in diminishing congestion. Six months later all symptoms had disappeared. The tumor had so much diminished in size that it reached but slightly above the pubes. The patient could take long walks with comfort, menstruation was scanty and painless, and she refused to consider an operation. Two years later, the menopause was established. The patient still reports every few months. Now there is only an irregular tumor, freely movable behind the pubis, and entirely without sensitiveness. She was allowed, without question, to go abroad. Both the patient and her husband are fully aware that

degenerative changes may come at any time, and are ready to return should any pelvic symptoms arise.

Further conditions, involving the question of operation, are: Accidents of childbirth and malignant disease. With improved methods of midwifery, the former are now seldom seen calling for secondary operation. But malignant disease is a constant possibility. No one familiar with its contributing causes would leave cicatricial tissue to become an irritant, or interfere with pelvic circulation. It is inexcusable to treat a beginning malignant condition for an eroded cervix, when by the use of cocaine, in one's office, it is so easy to remove, without the patient's knowledge, a small piece for microscopical examination. Of course, pus collections should not be allowed to remain in the pelvis any more than in any other part of the body.

With this definition of the limits of my subject, I will mention some of the more frequent general conditions that call for treatment in non-operative gynecological patients, and methods used to correct them; and some of the most frequent local troubles found in these patients, and the means utilized to relieve them.

There will be no attempt to treat this subject exhaustively.

In dealing with these cases successfully, one must realize that while they present themselves for gynecological treatment, many of their symptoms are not purely and exclusively gynecological, although often they are reflexes from functional disturbances springing from the original pelvic disorder. While the local conditions must be treated, the local measures adopted will be made more effective if, in each case, combined with them, is a careful consideration of the general condition, and those measures utilized that will most quickly restore any functional disorder that may be present.

The most frequent general symptoms of these patients are the derangements of secretion and excretion, anemia, and symptoms of the nervous system. The most frequent local conditions are: (1) Displacements of the uterus, with or without displacements of the adnexa; (2) catarrhs, acute, sub-acute, and chronic, confined to the uterus, and (3) the same, with extension to the tubes and secondary involvement of the ovaries.

I have unbounded faith in local treatment, but in many cases one can use local treatment indefinitely and utterly fail to cure the patient if with it do not go general medication and hygiene. This includes diet, clothing (few women dress properly), carefully regulated out-of-door life, with some interest to divert the mind from introspection.

The most frequent nervous symptoms that gynecological patients wish to be relieved of are their nervous instability ("nervousness"), headache, backache and other neuralgias, and in-

somnia. The nervous symptoms generally arise from imperfect capillary circulation in some part of the nervous centres, more often the spinal cord, and are often associated with deficient excretion from the skin, kidneys, or bowels, or defective cardiac action. In considering the nervous symptoms, the condition and improvement of secretion and excretion first demand attention.

To assist excretion by the skin, I always insist upon a daily bath, preferably on rising, and taken as hot as can be borne for three minutes, scrubbing well with a brush or coarse cloth and soap, and followed by a cold shower, or cold water poured over the body from a pitcher. With delicate patients the latter is preferable, since salt can be added to saturation, which will raise the specific gravity of the cold water, and less shock will be felt. One unconvinced of the amount of waste thrown off by such a procedure, need only examine a specimen of urine taken before and another after such a bath, and note the amount of urinary solids in both. I always give my patients, with the directions for the bath, a little idea of the anatomy of the skin, its condition when the glands are not acting well, and also of the vasomotor physiology involved, thus insuring their hearty co-operation. Engelmann, of Krenznach, has written that "for gynecological patients general bathing under scientific supervision is a remedy of great value. Associated with friction it acts on the same principle as a counter-irritant, attracting a considerable volume of the circulation to the surface, thereby relieving splanchnic congestions, and by stimulating the nervous system becomes an active promoter of absorption. It is valuable as a remedy for chronic exudates, adhesions, neoplasms, and in the treatment of amenorrhea due to obesity."

The amount of urinary solids voided daily by a gynecological patient should be early determined. Not infrequently I have found the excretion of solids 30 to 40 per cent., or even more, less than normal. These patients present varying degrees of nervous irritability, and in some extreme cases are near uremic convulsions. I consider that it is far more important in such cases that the renal insufficiency be determined than that the displaced uterus, or prolapsed or diseased ovary or tube, be diagnosed. We must not forget that the kidneys, ovaries, and tubes spring from the same source embryologically. It is a clinical observation that a close sympathy exists between renal insufficiency and pelvic disorders. Patients with renal insufficiency will complain of irritable nerves, more or less headache, backache, and insomnia. Large draughts of water often restore the kidney action without medication. I have such patients take at least eight glasses a day, either hot or cold, on an empty stomach. Where insomnia is a marked symptom, I have found two or three glasses of water, two



or three hours after dinner, in the evening, to be a better hypnotic than drugs. I always direct that, upon lying down, the patient shall rest upon the right side for a time to allow the water to pass readily out of the stomach into the bowel. If one selects a pure and tasteless spring water it is not difficult to have any amount desired taken with the most satisfactory results. Malted milk is valuable as a hypnotic in this connection, a cupful taken hot on retiring, and again in the night, if wakeful. Of course, a weekly laboratory examination of the urine is a matter of routine.

It has been aptly said that "constipation, that protean monster, can derange more lives with neurotic symptoms than any other one pathological condition that can be named." It is, as a rule, present, to a greater or less degree, in all gynecological cases. Mild cases will be corrected by simple laxations and régime. The loaded colon exists much oftener than is suspected in those who have daily movements, as well as those who have not. The daily movement may pass down through the accumulation of feces, impacted in the loculi. Two symptoms without an abdominal examination are suggestive of a possible colonic impaction, the presence of chloasmic spots and the voiding habitually of very dark feces. When laxatives are relied upon, I have found it advantageous to give with them calomel or blue pills, more or less frequently. The best means to rely on to empty a loaded colon has, in my experience, been colonic flushings. They should be used daily, as long as dark feces are voided, once or twice a week when the discharges become yellow. These flushings have been called "liver washers," because, if properly given, a large part of the water is absorbed from the intestine, taken up by the portal circulation, and passed through the liver. A more or less congested liver is always present in these cases.

The patient, in the knee-chest position, receives from two to six pints of water as hot as can be borne, either soapsuds, or a physiological salt solution. As the colon becomes distended, the scybalous masses usually separate from the wall of the loculi, and fall into the lumen of the bowel, but if this does not readily occur, gentle kneading of the bowel after it is filled with water will help to dislodge them.

The specialist who sees many cases of diseases of women realizes the very great importance of having a careful abdominal examination precede the pelvic one. Many cases show varying degrees of fecal retention, but the following case is fortunately an unusual one in its exaggerated degree of colonic involvement:

Mrs. L. Md., aged 68, an extremely nervous and hysterical woman, a patient of Dr. Julia G. McNutt's, recently presented herself, after an absence of some months. She reported that she had been more or less confined to her bed for four months, and

that she had been trying for several weeks to get strength enough to come to the city from one of the suburbs, in order to see if she could not be relieved of the constant discomfort in her right side. She came into the office walking with difficulty, supported by her son, a broad-shouldered athlete over six feet in height. Her local physician had assured her that there was a gradual development of a tumor in the right side, and, from the position, it was probably connected with the appendix. Immediate operation was advised. She wished to see Dr. Julia McNutt before deciding. She could distinctly define the mass herself. It was extremely sensitive. It was noticed on shaking hands with her that her skin was cold and clammy, the sclera yellow, complexion pale and muddy, ebullasmic spots on the face. There had been no elevation of temperature. With this history the condition of the colon was interrogated before a pelvic examination was made. As suspected, the large, defined mass was found to be entirely within the bowel, doughy to the touch, and very sensitive on account of the long retention. The ascending, transverse, and descending colon was crowded with feces, and on vaginal examination the whole pelvis was found to be filled with a protruding rectum containing hard, scybalous masses. It was difficult at first to make the patient understand the real condition. She had had a daily movement by rochelle salts and found it hard to realize how the salines could keep a canal through the centre while allowing the mass to remain. In her thankfulness at escaping from the dreaded operation, she was willing to follow the directions which were, colonic flushings daily, laxatives, bitter tonics, and strychnine. In a week she returned, smiling and unsupported, and happy to have lost her tumor. Examination confirmed its entire disappearance.

I believe antioinfection from renal, intestinal, or cutaneous insufficiency, to be of supreme importance in these cases. It is well recognized by neurologists as an etiological factor in their specialty, and as a very important point in considering the nervous symptoms of gynecological cases it is not to be lightly passed by.

No one symptom is reported to us so frequently as occipital headache. It will be found frequently in conjunction with a weak heart, the most common cause of which is the poison absorbed from intestinal decomposition. It has been said very tritely that "the weakness of a weak heart is of the greatest possible consequence." This occipital headache yields readily to one or two doses of digitalis. Coal tar derivatives are decidedly counter-indicated. It used to be supposed that it was because of the direct cardiac stimulant that digitalis behaved so well. But Sajous points out that it is quite indirectly a heart stimulant. He says: "Digitalis is probably the most perfect cardiac stimulant of our pharmacopœia, but only because better than any other drug it

enhances the activity of the pituitary body, which, in return, so stimulates the suprarenal glands as to bring them to their highest functional possibilities. The physiological action of the suprarenal glands is to transform or destroy the toxic substances which are produced in the organism under the influence of muscular activity and of the nervous system." Its action, then, is to start up this circle of activities that neutralize the toxins that depress the heart.

Most of these patients are anemic, partly from autoinfection. Although iron is so much needed, it is, as a rule, badly borne. Those substances that increase nutrition, usually give the most valuable results, peptonoids, phosphates, malt extracts, and cod liver oil when tolerated. It is important to have blood examinations made at regular intervals as indicated. The full benefit of a blood examination can be obtained only by the examination of all the constituents of the blood. During the last year this fact has been most clearly demonstrated in the case of three sisters, who, although with the same heredity and environment, presented very different temperamental states. Their hemoglobin varied but slightly, being respectively 78, 72, and 60 per cent. This test could have been of little service as a guide to the general treatment, if there had not been other marked characteristics in the blood of each, which pointed to decided differences in their general conditions, and suggested entirely different lines of treatment in the individual cases. The results entirely justified the adoption of measures along the lines indicated by the several blood analyses. The following is a report of the blood examinations in these cases made by Dr. R. L. Watkins, together with notes of diagrams and treatment:

Miss O. D., single, aged 36. Myofibroma; hysterectomy; hematocele; blood corpuscles diminished from hemorrhages; microcytes; neurasthenic.

|                  | Hemoglobin   | Red cells | White cells | Microcytes |
|------------------|--------------|-----------|-------------|------------|
| July 20, 1904 .. | 78 per cent. | 2,950,000 | 5,900       | Many       |
| Oct. 25, 1904 .. | 85 "         | 3,450,000 | 6,500       | Diminished |
| Feb. 23, 1905 .. | 93 "         | 3,500,000 | 4,500       | Less       |
| June 8, 1905 ..  | 98 "         | 3,900,000 | 5,900       | Very few   |

*Treatment.*—High, dry inland air; laxatives; bitter and heart tonics; peptonoids; electricity.

Miss A. D., single, aged 28. Endometritis; salpingitis; autoinfection; neurasthenic.

|                  | Hemoglobin   | Red cells | White cells | Microcytes |
|------------------|--------------|-----------|-------------|------------|
| Jan. 28, 1905 .. | 72 per cent. | 3,140,000 | 5,850       | Many       |
| Feb. 23, 1905 .. | 80 "         | 4,140,000 | .....       | "          |
| June 8, 1905 ..  | 80 "         | 3,540,000 | 6,550       | Absent     |

*Treatment.*—Hygienic measures; laxatives; digestives; mineral acids; nerve tonics; electricity.

Miss W. D., single, aged 24. Pelvic peritonitis; anemia; exostoses of middle turbinated bones.

|                  | Hemoglobin   | Red cells    | White cells | Microcytes |
|------------------|--------------|--------------|-------------|------------|
| Feb. 23, 1905 .. | 60 per cent. | 3,750,000 .. | 6,900 ..    | Very few   |
| June 8, 1905 ..  | 72 ..        | 3,900,000 .. | 7,100 ..    | "          |

*Treatment.*—Operation on nose; laxative; iron; fat emulsion; electricity.

All had pelvic disturbances, and all were anemic. The first had a large myofibroma of the uterus, with very profuse hemorrhages. Following operation her blood showed red and white cells in good condition, but their number really diminished to about one-half the normal quantity. A great many microcytes were present, probably the result of the repeated hemorrhages (Jaksch). The second had dysmenorrhea of long standing, with endometritis and salpingitis, autoinfection, and was neurasthenic. The pelvic reflexes had been the cause of marked disturbances of excretion and secretion, which in turn induced autoinfection and the resultant neurasthenia. Autoinfection showed in the blood by very marked microcytosis. While there was not such rapid improvement in the blood condition of this patient as desired, except for entire disappearance of microcytes, there has been a great improvement in the functional disorders and the condition of the nervous system. The third case had a pelvic peritonitis, secondary to a catarrhal salpingitis. She had one nostril occluded and the other much narrowed by exostoses. Diminished hemoglobin was considered due to the difficulty of inspiration with imperfect oxygenation of the blood. The nares were relieved by operation, and improvement followed. In each of these three patients there was enlargement of the thyroid gland of varying degrees. This showed that there had been of long standing a vasomotor irritability which had resulted in this partial paresis of the nerves in this locality. This is a not infrequent complication where pelvic reflexes have been in existence for some time, and this complication, as a rule, disappears when the nerve fret is removed and vasomotor tonicity restored.

When a patient presents herself for local treatment, and on inspection we see a mucopurulent or purulent discharge escaping from the cervix, we must first decide as to its nature and cause. For treatment this leucorrhea comes into three classes:

(1) Congestive leucorrhea, caused by conditions outside the organs of generation, such as constipation or abdominal tumors, fluid collections, or plastic exudates.

(2) Due to displacements of uterus or adnexa, which would affect the circulation.

(3) Due to diseased state of the uterine mucosa and glands, or of the appendages, with or without the former conditions also.

Fortunately many patients can be readily placed in the first or second class. We can promise a more or less speedy relief of symptoms, as we are able to relieve the constipation, elevate and support the uterus, if indicated, and where accompanied by local and general relaxation, increase general and local tonicity. Where a vaginal support is indicated, cotton or wool should be used at first, but as soon as possible a firmer one of soft or hard rubber should be substituted, the latter always when it can be worn, for its greater cleanliness and firmer support. One should aim to limit as early as possible the patient's visits, having her return, however, as often as indicated to assure one's self that improvement is progressive. All support should be removed as early as can be done with safety, insisting upon a return at stated times, that the gynecologist may be sure that restoration has been secured.

The subject of this paper requires a somewhat detailed description of vaginal tamponade, and the subsidiary local measures that usually accompany it. As the vaginal tampon is an agent useful in both simple and complicated non-operative cases, they will be considered together under this head. If the patient be placed well down in the knee-chest position and the perineum raised by the left index finger, the air enters and by its own weight the whole pelvic contents gravitate toward the abdominal cavity. If this does not readily occur, the finger holding the perineum can be carried forward, and by gentle pressure against uterus or appendages, help them to move up as far as possible. No pressure should be used that causes pain. It may be that no perceptible dislodgment can be obtained, but a tampon properly placed will give comfort, and medication can be kept in contact with the tissues. If one end of a narrow strip of non-absorbent cotton or wool, 12 to 19 inches long, be carried by a long dressing forceps against the back of the index finger as it holds up the perineum, up into the posterior cul-de-sac, the tissues along the canal need not be touched. The tampon can be packed gently back and forth in the cul-de-sac more readily and with less discomfort to the patient than can be done with the aid of a Sims' speculum. The material should be soft and yielding, either aseptic non-absorbent cotton or sterilized wool. Absorbent cotton should never be used, since it tends to pack into a hard mass when wet. The whole of the posterior cul-de-sac should be filled, but not packed hard enough to cause discomfort by pressure. In introducing the tampon, the end first carried up has a string attached of firm, soft knitting cotton. This end, seized by the forceps, is saturated with the medicament selected and turned over into the

adjoining clean part of the cotton. It is then passed up quickly to the cul-de-sac, before the medicament soaks through, to be rubbed off on vulva or vaginal canal. The lower end of the string, caught around the little finger of either hand, or between the thumb and second finger of the left hand, as the tampon is introduced, prevents the entire string from being carried up with the tampon. No two patients need the same amount of cotton or wool. With the same patient the amount varies according to fullness or emptiness of the bowel, or the forward position of the uterus and adnexa. The object is to fill the cul-de-sac comfortably. One can readily tell in packing when there is enough, and the rest of the strip of cotton can be pulled off. Care should be taken that, without giving pain, the cotton is gotten well up behind the cervix. When in place, the patient should be directed to rise straight up on her knees, while the index or packing finger holds the cotton in place behind the cervix. By this precaution the air that ballooned the vagina is allowed to escape and the tampon, held by the finger, is not crowded down by the return of the elevated pelvic organs. At the same time that the tampon is held in place, if it is not too large, the cervix will be felt to ride down over the cotton, holding it back behind it. This leaves the external os free, allowing opportunity for free escape of any discharge from the uterus. A carelessly adjusted tampon can do much harm by preventing free drainage. On removing the finger, while the patient is still straight upon the knees, the part of the string remaining outside should be cut, leaving only a piece an inch in length beyond the vulva. If it be longer, it may be drawn upon by the inner part of the thighs in exercising and cause the tampon to be displaced, as well as cause chafing. When the patient stands, the pelvic organs gravitate back again toward their former position, but the tampon now receives their weight and holds them somewhat above their former level. If only for a fraction of an inch, it is sufficient at least to take the drag off adhesions if they are present. If there is tubal involvement, I usually place a little larger amount of packing on each side of the cul-de-sac, if it can be pressed up without pain. If the distal end of the tube can be kept in the slightest degree higher than the proximal, it will favor drainage into the uterus. In rare cases large tubal collections have discharged through the uterus, the probable cause being that the exudate caused an adhesive inflammation of the tube, holding it upon a plane high enough to permit drainage. When the inflammatory swelling, which helped to produce the closure or constriction of the uterine end of the tube, has been sufficiently reduced, the escape of the fluid collection is possible. As a rule, such a fortunate termination does not result. Generally, by increased weight from its pathological condition, as well as relaxed

supports, the tube has sunken to a lower level than the fundus. Becoming adherent in this new position, any evacuation of fluids into the uterus is mechanically prevented. In a catarrhal salpingitis of long standing, tamponade may make drainage through the uterus possible. And, not infrequently, vaginal treatment, with patient, judicious attention to detail, will show the entire clearing up of a case with exudations, adhesions, and tubal and ovarian complications. So long as there is progressive improvement, one is justified in continuing these methods. Whether the condition be changed by drainage or absorption, it is well to follow out the measures that show progress, although one may not always be positive about the exact course taken in the recovery. Should there be, however, recurrent attacks of peritonitis, however slight, or symptoms of retained pus, the patient should be urged to submit to operative interference and warned of the dangers of delay. The patient who is under treatment for a heavy displaced uterus, with involvement of the appendages, should wear continuously a properly adjusted tampon, to be changed as indicated. Particularly should this be the case during the menstrual period, especially if the flow be profuse or prolonged. It should be changed daily if the patient is able to be about. Many do much better to be so protected and permitted a certain amount of liberty. The tampon should also be changed daily where there is an irritating leucorrhea or an odor to the discharge. As improvement follows, its renewal may be delayed to the second, third, or fourth day, as indicated. When conditions improve, and there is no discharge, but a firmer support is impracticable, I have used wool and seen the patient only at intervals of a week or ten days. The tampon need not be removed when douches are taken, if it is placed well up behind the cervix. It becomes saturated with the water, but when the patient sits up the water is pressed out, and if wool be used it will retain its elasticity. In most patients, when the local sensitiveness is relieved, a properly adjusted support must take the place of the tampons. It is interesting to note how often, when the utricular glands are being restored by the intrauterine injections and the local circulation improved by appropriate treatment, the weight of the uterus and adnexa have greatly diminished. The ligaments, muscles, connective tissue, and the blood vessels have participated in the general upbuilding of the whole body, and they can now give the needed support that they were intended for. Then we begin by lessening the amount of material in the tampon, after a little leaving it out after every other visit, watching effects and returning to its use at any time indicated. It is left out altogether when it is found that the sagging does not return on its removal.

In a case where there is much sensitiveness, exercise is

restricted and a douche is ordered every two to six hours, of twenty to thirty minutes' duration, at a temperature of 105 to 124 deg. F. In some cases, in place of the douche, more rapid results are obtained in relieving pain and inflammation with the use of antiphlogistine. One-half to one ounce wrapped in the end of a small tampon, is passed quickly up into the cul-de-sac, with the patient in the knee-chest position. The rest of the tampon is packed lightly over it to keep it in place, and it is changed in forty-eight hours. At the same time a layer one-fourth inch in thickness is spread over the hypogastrium, covered with absorbent cotton, to be removed when the remedy dries and peels off. This will be twenty-four hours in some instances; in others not till forty-eight hours or more. Pure ichthyol often gives quick relief from pain. Later a solution of ichthyol, twenty-five to fifty per cent. in glycerin, may be used. As the tissues become accustomed to one remedy, change to another, which may be of no greater value, but which will serve to break up a "habit of body." Thigenol is as valuable as ichthyol, while it has the advantage of being odorless. The stains made by it on linen can be quickly removed, and it is also non-irritating and antiphlogistic. It is used in solution in glycerin in eight to twenty per cent. on tampons. A change may be made to applications of Churchill's compound tincture of iodine to the vaginal roof, using pure glycerin upon the tampon, at the same time painting the hypogastrium with this tincture if needed. To some patients glycerin is an irritant to the mucous membranes. If care is not taken commercial glycerin may be substituted by the druggist, which is irritating from a trace of sulphuric acid. If I am convinced that the fault is not in the glycerin, I substitute in its place albolene or lanoline. Where simple astringency is needed, I use upon the tampon a solution of tannin or acetate of aluminum in glycerin, one to two drams to one ounce. When a patient complains of constant pain, I apply a small fly blister, moving it about as fast as one heals; or the Paquelin cautery, lightly brushed over the seat of pain. Both give relief.

In my experience there is an undoubted value in the use of electricity for neurotic women and young girls, as an adjunct to the local treatment. As the patient lies upon the table, a flat pad is placed under the neck, connected with the positive pole of a galvanic battery, another under the sacrum, connected with the negative pole. The current is made as strong as can be borne for the needed vasomotor stimulation. This treatment is emphasized while the vaginal treatment is minimized. If there are many reflexes from the pelvis, after a little the positive pole is removed from the neck and placed on the hypogastrium. Even a ten-



minute application does much good. I frequently alternate at every other visit the high frequency current or the vibrator.

When we are obliged to place a patient in the third class, where the endometrium is diseased, to the preceding treatment should be added, as early as safety permits, intrauterine irrigation.

The uterus that needs irrigation is as a rule heavier than normal. The endometrial glands are diseased and the irritation has brought more blood to the organ. The interstitial tissue has greatly increased and the ligaments, blood vessels, and connective tissue packing are all relaxed and no longer furnish adequate support. "In the light of modern pathology," says W. E. Ashton, "inflammation of the uterine mucosa becomes a subject of vital importance, as it is the starting point of nearly all the inflammatory lesions of the pelvic organs." As the uterus and appendages sink in the pelvis they usually follow the curve of the sacral canal and become retroposed. The pelvic circulation is interfered with by the descent and displacement. The veins would need to empty themselves uphill, which they are little disposed to do. They become tortuous and distended, and the pelvic organs are fed by dammed-back venous blood. The increased weight and displacement lets the organs interfere more or less mechanically with the action of the rectum, allowing fecal retention. The crowded bowel, in turn, by pressing forward and downward, increases the displacement of the uterus and appendages. The fluid part of the retained fecal matter becomes absorbed into the pelvic circulation, making a blood that will take little part in any nutritive changes that are attempted. The dusky red look of the tissues must be changed to a brighter coloring, and, until we establish a clean arterial pelvic circulation in place of the dirty venous one, it is useless to expect much from intrauterine irrigation. Diet, exercise, and laxatives can do much, but better and more far-reaching results will be obtained if with them are combined colonic flushings, since they not only empty the bowel more perfectly, but also when part of the water is absorbed, they flush the liver and kidneys, organs always more or less congested in these cases.

The weight of a heavy engorged uterus retrodisplaced, dragging upon tender and adherent ovaries, complicated by varying degrees of salpingitis, will, with every movement, be a constant source of distress. Unless the treatment inaugurated makes comparative comfort take the place of ever-present varying degrees of discomfort, it will be difficult to persuade the patient to submit to it long enough to prove its value. The first consideration is, to restore the pelvic organs to a better position and to remove the strain upon adhesions if they are present. In short, the condition

calling for intrauterine irrigation in non-operative gynecology is always a complicated one, and its various divisions must receive appropriate attention. Some patients who should not be irrigated at the physician's office, may be so treated at home or in the hospital, where they are kept in bed. Such are acute inflammatory conditions, either septic or gonorrheal. Moreover, chronic cases, where the patient is very nervous, or the appendages are involved to any great degree, should not be irrigated until general and local irritability is diminished by general régime, douches, and tampons. A sedative tablet of valerian, assafetida, and sambul, two to six times a day, will often be a valuable help to control fretted nerves.

The intrauterine irrigation for postpartum and postoperative use is a procedure of long standing, and from it and its beneficent results has sprung its employment in nonoperative gynecology, originating with operating surgeons. Its rationale is well known as a cleanser and antiseptic (if medicated), as a stimulant to the vasomotor nerves, blood vessels and muscular fibres of the uterus.

The time-honored medicated cotton-wrapped probe has very little effect upon the uterine mucosa, a fact easily proven if such a probe, wet with iodine, be passed to the fundus of the uterus before a hysterectomy. When the organ is laid open after removal, the staining will be found to be confined to the cervical canal in proportion to its patulousness, and a small stain will be seen at the fundus where the probe point touched. On account of the pear-shaped character of the cavity, the rest of the wall will have escaped the staining. To treat thus a chronic corporeal endometritis or metritis, one may expect to go on indefinitely with the work, should the patient permit the treatment to continue. Intrauterine treatment by the intrauterine syringe is scarcely more effective, while not without danger. Intrauterine applications of electricity in the hands of a specialist do not enter into the scope of this paper. One with hospital experience realizes how readily all parts of the uterine cavity can be reached by an intrauterine irrigation through a double current catheter. The cervical canal must be sufficiently patulous to allow the return flow should the eye of the irrigator become clogged with thick mucus or other obstruction. It is a perfectly safe procedure to practice in one's office work, provided intelligent care is taken in selecting cases, and the same aseptic precautions are observed that are considered necessary in hospital work, fresh gowns, sterilized instruments, solutions, and accessories, but, above all, care in selecting cases. Of course, no physician who was attending a septic case would practice intrauterine irrigation any more than he would use the scalpel under such circumstances.

The technic of intrauterine irrigation is comparatively simple.

The patient lies upon the table with a Kelly pad under her and the knees well drawn up. A cleansing vaginal douche is first given of sterilized water at a temperature of 105 to 115 deg. F., and, if indicated, one and one-half per cent. of lysol or two per cent. creoline is added.

The intrauterine irrigation which I prefer, is the Kelly modification of the Fritsch-Bozeman.

In most cases the medium size can be used, but one can be had which is no larger than the tip of a Simpson's sound, still large enough to permit a small, steady stream to pass. With so small an instrument few cervixes need dilating. Should, however, the internal os be so firm as not to readily admit this little instrument, I do not try to push it through, but see if a few moments' use of the negative galvanic current will not make it glide in. When giving intrauterine treatment, it is my custom to place over the hypogastricum a flat electrode connected with the positive pole of a galvanic battery. Another, with a handle attached eight to twelve inches long, is connected with the negative pole and placed under the sacrolumbar region. When desiring to dilate the cervix the stylette of the negative cord is removed from the handle and dropped into the little ring on the outer end of the irrigator. The instrument resting in the cervical canal with the tip firm against the internal os, will as a rule gradually dilate the os, and soon be felt to "slip by." If still held for a few moments longer, one can recognize that the tissues have sufficiently relaxed so that the catheter is freely movable and will permit an outflow of fluid if required. One must always be sure of a possibility for the exit of fluid, should the catheter be clogged. No risk can be run of distending the uterus by retention and the escape of fluid through the tube into the peritoneal cavity. Should the relaxation of the internal os not be so readily secured no further effort should be made in the office, certainly not by metal dilators or tents. Such a case should be dilated under ether, either at home or in a hospital. Plain sterilized water I most frequently use. The temperature may be from 100 to 118 deg. F., according to the patient. It should always be as hot as is comfortable. One patient will have discomfort if the temperature is above 100 deg. F., while others who have pain at 105 deg. will be relieved if it is raised to 110, 115, or 118 deg. The temperature may be increased gradually during the douche, and from time to time. The quantity used varies from one pint to one gallon. Where there is much discharge the irrigation is continued until the water runs clear. If pain has been induced and the hot water acts as a sedative, it is allowed to flow into the uterus until the discomfort is relieved. If the continued flow does not relieve pain, the irrigator is removed at once from the uterus, and the fluid is allowed

to flow into the vagina until discomfort is controlled. When the discharge has been irritating to the last pint of irrigating water some bland antiseptic remedy is added, or boric acid, one ounce to a pint, can be used. In infected cases, 1 to 10,000, or 1 to 3,000 bichloride of mercury; carbolic acid, one to two per cent.; or ten, twenty to fifty per cent. of an organic salt of silver may be employed. The last I have found specially valuable in gonorrhoea. In hemorrhagic conditions, such as fungoid endometritis or after abortion or curettage, I use Churchill's compound tincture of iodine one to two drams to an ounce of sterilized water. In these hemorrhagic cases, I often supplement irrigation by cramp bark or viburnum compound tablets, two every two to six hours, according to indications. Ergot may be sometimes indicated, but most cases yield without it, and the viburnum has the advantage of causing little or no disturbance of the stomach, which cannot be said of ergot. When the pain of uterine cramp occurs, it may be managed by simple measures. While bichloride of mercury is a most satisfactory remedy where needed, perhaps with this more than any other drug one needs to be prepared for more or less pain. Local means, such as a hot water bag, the hot vaginal douche, with or without the irrigator, the positive galvanic electrode over the fundus, with negative over the sacrolumbar region, may give relief. If not quickly effected, one to three tablets of a compound of acetanilid, caffeine citrate, camphor monobromate, and sodium bicarbonate may be given. Rarely a 1-4 gr. tablet of codeine may be needed. In these office cases, seldom, if ever, do I give a hypodermic injection of morphine. Occasionally it may be necessary in acute pelvic cases in hospital or at home. Then I always combine it with atropine sulphate, 1-150 to 1-200 gr., which will, in most instances, prevent its nauseating effects. I consider it a misfortune when a gynecological patient has to have a dose of opium or morphine, except in those acute conditions where it is absolutely impossible to substitute milder remedies. We all know the proneness of these patients to contract a drug habit, and loth should we be to lead one into all the horrors of its possession. A patient after an intrauterine irrigation is not allowed to leave the office with pain, and she is carefully instructed how to meet any return of it, which will be rare if asepsis has been strictly observed. Its return can, as a rule, be traced to some fault in mechanism, not in method, provided intelligent care has been exercised in selecting the case for irrigation in the office. And, moreover, if each time that the patient presents herself for such treatment the gynecologist makes sure that she is at that time in a safe condition for it. In a nervous, apprehensive patient, to prevent shock or relieve it, should it begin to appear, from half an ounce to an ounce of aromatic spirits of

ammonia in water may be given, or whiskey (rarely), before or following the irrigation, as seems indicated. It tides over or relieves the symptoms which are not apt to appear again, when the patient realizes what she is to expect.

In conclusion, it may be said that in safe hands, intrauterine irrigation can be proved to be of great value in selected cases in office work. Old, so-called chronic cases of endometritis and metritis, with or without tubal and ovarian involvement, can be, in most instances, greatly benefited and often practically cured, provided the irrigation be supplemented by other means of treatment that are equally needed. No two patients can be treated just alike. No hard-and-fast rules can be laid down. Only experience and great care in observation can teach why one patient can be safely irrigated in the office and why another that might seem like her in many respects to a careless or indifferent observer, should only be irrigated after divulsion and curettage under ether, and where rest in bed after irrigation can be insisted upon.

In closing these notes upon some of the leading points in non-operative gynecology, it may be emphasized that nowhere does careful discrimination in diagnosis and prognosis have more value than just here. And another of the inferences from experience is that there is a large field for patient office work in this department of practice, and a field that is not over tilled.—*Med. Record.*

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### ABSTRACTS.

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**Etherization of Children.** — According to W. G. Elmer, (*Archives of Pediatrics*, New York, June), there are but few occasions in which ether may not be given to children in preference to other anesthetics. The most important of these is an abnormal state of the respiratory organs, as in acute bronchitis, pulmonary congestion or pneumonia. The preparation of children for the operation and anesthetic does not differ materially from that of adults. Solid food should be absolutely forbidden on the day of operation. If an operation is fixed for eleven o'clock in the morning, a cup of broth may be given at seven, unless there is some definite reason for not doing so, and water may be given at the same time. The fluids are promptly absorbed from the stomach, and four hours later the child should be in excellent condition for the anesthetic. The open method of administration is the one which should be adopted always. In order to lessen shock and to preserve bodily heat and energy, the vital activity of the tissues should be kept up to its highest point, and for this purpose an abundance of oxygen is necessary. This

can best be supplied by pure fresh air. The smaller size of Allis inhaler should be used. This should have a clean, folded towel pinned closely about it, and permitted to extend about an inch below the lower margin of the cone. The open end of the cone should always be allowed to remain free and unobstructed, admitting pure air without restraint. If the child is very much reduced from prolonged disease, and the operation is apt to be a long and dangerous one, every precaution must be taken to preserve the vital forces. The child's body should be swathed in cotton batting or an electrotherm may be used on the operating table. There must be absolute quiet in the room, and only the anesthetist and the nurse should be present. The article closes with specific directions as to the method of etherization and how to meet emergencies.

**Alcohol as a Therapeutic Agent.**—J. Barr (*British Medical Journal*, July 1st) states that it is impossible to foretell the action of alcohol in any particular case or to know whether it is going to do good or harm. He dissents from the popular opinion that constant use of alcohol confers immunity from its toxic effects and says that with increasing years men are able to stand less and less alcohol, while in advanced age the results of free inhibition are disastrous. From its irritating action on the nerves of the stomach alcohol may cause a temporary contraction of the splanchnic vessels and a slight rise in the general blood pressure. Once absorption takes place, however, it has a paretic effect on the vasomotor system and the arterial blood pressure falls. There is then a rush of blood to the surface through the paretic vessels; the nerves and vessels lose their power of regulating the body temperature, and consequently there is a large cooling surface which allows of a rapid lowering of the temperature. This effect may explain the value which some German physicians attach to the use of alcohol in conjunction with cold baths. Barr states that in pneumonia almost the only use of alcohol is as a specific. He also states that alcohol is not a food in the proper sense of the word, and that the advice of the Apostle Paul to Timothy to take a little wine for the stomach's sake must have referred to a fairly dilute solution of alcohol, as we know that while strong potations increase the secretion of gastric juice, they inhibit the digestive function. Barr refers at some length to the effect of alcohol in various diseased conditions.

# *Medical Jurisprudence and Toxicology.*

IN CHARGE OF  
A. J. JOHNSON, M.B., M.R.C.S. (ENG.),  
W. A. YOUNG, M.D., L.R.C.P. (LOND.).

## PRESIDENTIAL ADDRESS.\*

BY DR. GLARIEUX.

*Gentlemen*,—In calling me to the great honor of presiding during the year 1905, at the meetings of the Society of Mental Medicine of Belgium, you have thought not of my own feeble, personal merits, but of the position I hold as a member of the Central Committee of Inspection of the Insane Asylums of the kingdom.

You have thought, that at the prospect of an eventual revision of the law of the administration of the insane, at a time when in scientific bodies, in the congress, in medical papers and even in political journals a great many questions of interest to the medical profession and especially to alienists are being discussed—you have thought, I say, that it would perhaps not be entirely useless to have as president of this society a man who, through his official position, might contribute to hasten the solution of such important questions, which are always being discussed, but which are never being acted upon.

You have thought, I am sorry to say mistakenly, that the committee of inspection had the same rights here as similar institutions have in neighboring countries. You know that in Holland the medical inspectors have most extensive powers, and that alienists find in them powerful aids in helping them to their just rights, and the insane find in them strong and active defenders of their interests.

Notwithstanding this, if we have not the same authority and the same powers as our colleagues, yet we are imbued with the same zeal and the same devotion to the cause.

All our efforts will tend to the double end, to elevate the position of the medical alienists and to improve the condition of the poor unfortunates who are suffering from insanity.

Before communicating to you the impressions which I gathered in my trip through the different asylums, you will permit me to

\*Translated by Alfred W. Herzog, Ph.B., A.M., M.D., of New York, Member of the Medico-Legal Society, from the Bulletin of the Belgium Society of Mental Medicine.

thank our president who precedes me, for all the tact and zeal which he has used in exercising his functions.

You know that Dr. Villers has, since his entrance to a medical career, consecrated his activity, all his energy and all his science to the prosperity of our society, and he has not left his important functions of secretary until he was assured of the aid of a successor worthy of himself.

I am glad to greet at this time Dr. Massant, our secretary, and to express to him our gratitude for his efficient work. With the aid of such an excellent assistant I view the labors of the presidential position with less fear and greater calm, knowing besides that your valuable encouragement and your well wishes will never lack.

Myself being connected with no insane asylum, neither public nor private, and guided only by my interest in the unfortunate insane, I believe I cannot be called in the wrong if I give you my personal and impartial impressions of eight years of inspection of these institutions.

I am glad to recognize, in all earnest, that in all our asylums, be they large or small, important improvements of a material and hygienic nature have been introduced. New buildings, larger and better ventilated, have replaced old ones suffering from the defects of old age; high walls, reminding one too strongly of prison walls, have been supplanted by artistic iron fences, which permit the poor insane to let their eyes wander in the neighboring gardens. Gas and electric light tend to dethrone smoky lamps, giving but feeble light; steam heat commences to replace charcoal burners. Flowers on the window sills please the eyes, and song birds in their little cages warble their happy notes, in strange contrast to the mournful sounds around them. The rooms are generally well kept, clothing and bedding clean and neat, the nourishment good and plenty, and I can bring no better proof of this than the picture of good health that can be read from every face. Lastly, I wish to compliment the keepers of our insane asylums for their devotion. Without professional training they give devoted care and spontaneous help, though it be not very enlightened nor intelligent. From all this I would conclude that our poor insane are kept in our asylums under good hygienic conditions and that they receive sufficient care.

But, gentlemen, let me ask you now, if your directors, who have shown themselves so impressed with these necessities of the insane, to make such material improvements in the asylums, have also been sufficiently impressed to facilitate for you the accomplishment of your important duties?

What have they done to elevate the prestige and the authority of the physician?



Do they give you those chances, which you demand, so as to be able to follow the progress of psychiatric science?

Do you hold in the insane asylum that important place which by right belongs to you?

Each time I visit an insane asylum I am painfully impressed with the secondary position which is given to the physician. I know asylums in which the physician has not even an office. How do you expect him to have a library or a laboratory under such circumstances? I am always forced to fight off the impression, and I do hope that I am wrong, as if the physician does not exercise his functions in the insane asylum, except when an insane patient has become afflicted with some bodily ailment, as if an insane person were not always a sick person, and if he did not need the services of the physician even outside of the sick room.

It is a sorrowful truth, gentlemen, which you recognize, as well as I do, that here in Belgium, among the leading class, in the middle class and in the lower classes, there are people who consider an insane as a dangerous being, dangerous for himself or dangerous for others, and that he must be locked up under any circumstances. Once locked up, this unfortunate for whom no efficient treatment exists, may one day get better, or may never get better, according to his own good or bad luck.

May I tell you, gentlemen, that I know medical men who, convinced of the uselessness of the intervention of the physician, deny the existence of a rational treatment of insanity and think for our unfortunate insane of nothing better than hygienic surroundings. And do you not think that your directors and legislators share their opinion, when they admit, or rather claim, that one physician is sufficient, I will not say to treat, but to occupy his time with from seven to eight hundred insane?

The complete abandonment in which mental medicine was left until the last few years, the fact that a physician could, without a day's preparation, I will not say become an alienist, but be put at the head of an insane asylum—are these causes not enough to give credence to the belief that an insane is not a sick person and that a physician could do nothing for the insane?

Our first duty is to protest in our writings and by our actions against this opinion. It is erroneous and superannuated. The asylum must become a hospital, the insane must be recognized as a patient, and as such he has the right to medical assistance. Your duty, your conscience and your dignity demand, that you make it known to your directors, that your labor is greater than your physical power, that there are limits to your physical strength, and it is time, high time, that you receive assistance.

I would be wanting in my duties if I did not pay my respects

to the laudable efforts which show themselves in various of our asylums. I know that all of you are animated by the best intentions, and I know also that if the progress is slow, this is not due to you, but because you are surrounded by influences which prevent you from accomplishing more. It is due to your perseverance that we are aiding in the gradual disappearance of means of constraint in our asylums, and that we hope to see installed new arrangements, which will permit us to use baths and other therapeutic means, and other so much desired improvements. Your scrutinizing looks seem to ask me, in which remedy I look for the solution of the present circumstances—whether I hope for it by means of a revision of the laws affecting the treatment of the insane?

I desire to remain, gentlemen, on the field of practical things, of things that can be easily realized. I wish to make an appeal to the good-will of all those who have the management of our asylums in their hands; an appeal to the Minister of Justice, who is always anxious for the rational treatment of the insane under his jurisdiction, as well as of the good name of the asylums of the State and of our Colonies; also, I wish to appeal to the ladies and gentlemen who are directors of our private asylums, who are all equally interested in the welfare and the progress of their establishments. I call the attention of them all to the principal question of the recruiting of adjunct physicians. You all know with what great interest we hear the news that the place of chief physician to one of our asylums has become vacant. But when a place of assistant physician becomes vacant, nobody listens and nobody cares, except, perhaps, the physician residing in the immediate neighborhood.

Why this indifference on the part of our young physicians?

Why don't they even care to try for the position?

The reason is, because, according to the custom in Belgium, the position of assistant physician seems to belong by right to one or the other of the young physicians of the village wherein the asylum is situated, and if no one want it there, to one or the other physicians residing in the village nearest to it.

Different reasons, which have nothing at all to do with the medical profession, nor with scientific achievements, friendship, perhaps, or the intention of helping some young practitioner, cause practitioners to get the appointments, who know of the existence of a branch of medicine dealing with insanity only from hearsay and who promise to purchase, but not always to study, after their appointment, the most elementary treatises of psychiatry.

These severe words, gentlemen, are not my own. They were spoken in 1896 during a meeting of this society by Prof. Masoin,

when the organization of the medical service in the insane asylums of Belgium was being discussed.

You see that this question is not a new one. I love to think that to-day it is sufficiently ripe to receive the beginning of a solution by means of the organization of assistant physicians at the height of their new functions.

My excellent colleague, Dr. Claus, in an address delivered in 1902, has given with a great deal of spirit and truth to the actual assistant physicians of our asylums the name of physicians *in partibus infidelium*, having like their colleagues in the ministry a field which they know only by the title which has been forced upon them.

Well, gentlemen, it is necessary that our adjunct physicians, *in partibus infidelium*, become acquainted with their flock, who need their aid and protection so much. It is time that the physicians-in-chief of our asylums be helped intelligently in their hard work, and that others bear with them the burden of responsibility of the moral, mental and physical health of so many unfortunate ones. According to my idea, the importance of the reorganization of the service of assistant physicians must be measured in accordance with the results which it can give. One must not lose sight of the fact that the assistant physicians of to-day must be prepared to become the physicians-in-chief of to-morrow. This stage in the asylums would be of incontestable use, in permitting the young physician to prove and to develop his knowledge and his aptitude, and causing him to devote himself to favorite studies, relating to neurology and to psychiatry, two twin sisters, which one must never separate.

A place of chief physician of an asylum becoming vacant, this place naturally would belong to the most worthy assistant physician, to the one who would be most likely to fill his new place perfectly. In creating an opening and a nearly assured advancement to the assistant physicians, we would also create a body of workers, so select that the State and asylum directors of private institutions could freely choose candidates, whose past guaranteed the future. To-day, gentlemen, in consequence of the happy initiative of the distinguished Professor Francotte, medical students may, without leaving the State, devote themselves to theoretical and clinical studies of mental diseases.

The medical faculty of Liege gives a certificate, stating that the student has submitted himself with success to an examination on clinical psychiatry. And if the number of the holders of this certificate is yet small, this is because this diploma up to the present has not been appreciated at its true value, and that the fact of receiving it gave no guarantee of an assured opening in the field.

Professor Masoin, in a recent communication to the Academy of Medicine, entitled "Remarks on the so-called Arbitrary Sequestrations, and on the Medical Service in Insane Asylums," tells us that on the ninth of last March the medical faculty of the University of Louvain had determined to give a special doctorate in mental medicine.

You all know that in Brussels, Professor De Boeck gives interesting clinical lectures on Psychiatry, which, notwithstanding all their attraction, draw not a desirable number of students, perhaps because these must have passed their theoretical examination, or because in the second semestre the time for examination draws near.

You see, gentlemen, that spontaneously laudable efforts from all sides make their appearance, for the purpose of making a study of mental diseases easier. Let us profit of the moment where the medical field seems overfilled, to encourage the young workers and to influence them to enter the road of mental medicine, notwithstanding the seduction which might be exercised by other specialties, which often may be more lucrative.

In organizing on a scientific base the corps of assistant physicians, with a guarantee of a future, one elevates greatly the prestige and the authority of the whole medical staff of the asylums. This will cause the indifference and apathy of students of medicine in regard to the study of psychiatry to be replaced by a just appreciation of the many advantages of this new field.

Permit me now, gentlemen, to submit to you the following propositions, which I am sure merit your approbation:

1. All insane asylums must have at least one adjunct physician, living in the asylum or at least in its immediate neighborhood.
2. The adjunct physician is to receive a sufficient salary to permit him to devote his entire time to the patients of the asylum and to the study of nervous and mental diseases.
3. Whenever a place of adjunct physician becomes vacant, the Society of Mental Medicine shall be officially informed thereof.
4. The proprietors or directors of insane asylums shall present a list of three candidates to the superior authorities. This list shall be submitted to the central inspection committee of asylums, and they shall choose the candidate, and their definite nomination shall be submitted to the Minister of Justice for approval.
5. Professional skill, scientific degrees, and the special diploma of doctor of mental medicine shall determine the choice of candidates.
6. After two years' service in the same asylum, adjunct physicians may exchange places with others in a different asylum.
7. It will be desirable that adjunct physicians do service in

an asylum for men, an asylum for women and an asylum for children.

8. Chief physicians are selected from adjunct physicians on account of personal merit.

Is it necessary, gentlemen, to enumerate to you the numerous advantages which would result from the permanent presence at the asylum of an adjunct physician, always ready for whatever might happen and animated by the sacred fire of science?

Let it suffice for me to tell you, that there would be, first of all, the recognition of the great truth, too much misunderstood among us, that the insane is a diseased person and that he has need of a physician. From this standpoint alone the service rendered would be immense. Besides there would be a constant medical inspection of the asylum. There would be the greater security to the family and the more rational treatment of the patient. There would also be a careful and complete keeping of statistics and observations of the clinical material. There would also be the introduction of scientific life into our asylums, through the exchange of views between master and pupil. There would also be the introduction of good-natured rivalry between the different members of the staff of the various asylums, rivalry the only object of which would be the interest of the sick and the progress of the science.

I appeal to the good-will of everybody. To you, gentlemen, who are professors, to draw to the flag choice men, full of ardor to work. To you, gentlemen, who are physicians of asylums, to prepare your assistants in such a way that they later on may be able to fill with dignity the position of physician-in-chief. To you, gentlemen, who are owners of private asylums, to understand that it is part of your duty and part of your interest to make the task easy for your physicians, and to elevate your asylums to the height of modern progress, so that they may be able to uphold with dignity the comparison with asylums of foreign countries.

*Noblesse oblige*—our past obliges us to march ahead. Let us not forget that Belgium originated the modern treatment of the insane, and that we count among our pioneers in this line the celebrated Guislain.

In the presence of such elevated interests it is worse than to be saving, it is wrong to be miserly, under the odious pretext of being economical.

Permit me, in closing, to use the beautiful words, which were uttered recently at the Academy of Medicine of Belgium, by the erudite Professor Masoin, whose knowledge and authority in the matter are universally recognized:

“But, it is a thing more grave, it is the assistance of the un-

fortunates, who have been attacked by insanity, and here hesitation is impossible. One must at least do as well as the neighboring nations. One must no more look at a few pennies than one looks at millions when it comes to other expenses."

A nation does more honor to itself by giving good treatment to its sick, than by carrying off victories in war. And to-day, even after many hundreds of years, historians rightly glorify the nations who, like the Greeks, honored their old men and helped their sick tenderly.

May our country some day receive the same praise.

—*Medico-Legal Journal.*

# *School Hygiene.*

## A NEW BLUE-BOOK.

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ONE of the latest publications of the British Government to reach Toronto is the Blue-Book, containing the report of the Inter-Departmental Committee on the Medical Inspection and Feeding of Children Attending Public Elementary Schools. It is issued in two volumes. Volume I. contains the Report itself, also appendices giving an analysis of various returns on these subjects and a summary of the same, together with extracts bearing on the same subjects from the Reports of the Scotch Royal Commission on Physical Training, and of the Inter-Departmental Committee on Physical Deterioration. Volume II. contains the List of witnesses, the Minutes of Evidence and twelve appendices, occupying 65 pages, chiefly memoranda from the British Dental Association, the Charity Organization Society, and other organizations, Instructions and Reports issued by the London County Council, and various educational authorities in regard to medical inspection, underfed children, etc.

The bare enumeration of the above contents will serve to show that these Blue-Books are by far the most valuable sources of information on medical inspection of schools and allied subjects now available.

The Committee was appointed on March 14th, 1905, by the Marquis of Londonderry, President of the Board of Education, and its membership is as follows:

Mr. H. W. Simpkinson, C.B., Asst. Sec. of the Board of Education (Chairman).

Mr. E. H. Pelham, Junior Examiner of the Board of Education (Secretary).

Dr. H. F. Parsons, Asst. Medical Officer of the Local Govt. Board.

Mr. Cyril Jackson, Chief Inspector of Elementary Schools.

The Hon. Maude Lawrence, Chief Woman Inspector of the Board of Education.

Mr. R. Walrond, Senior Examiner of the Board of Education.

The terms of reference were:

(1) To ascertain and report on what is now being done and with what result in respect of Medical Inspection of Children in Public Elementary Schools.

(2) And further, to enquire into the methods employed, the sums expended, and the relief given by various voluntary agencies for the provision of meals for children at Public Elementary Schools, and to report whether relief of this character could be better organized, without any charge upon public funds, both generally and with special regard to children who, though not defective, are from mal-nutrition below the normal standard.

In dealing with a report at once so important and so extensive, it is manifestly impossible to do more than refer briefly to the salient points.

It appears that, besides London, there are forty-eight educational authorities, in whose areas a definite system of medical inspection is established, generally, though not always in charge of a school medical officer. Often the medical officer of health is also the school medical officer, and this excellent arrangement is the natural outcome of the work done by the M. O. II. Often, too, the teachers have for years carried out a system of examination of the eyesight of their pupils. It is important to observe in no case does the inspection include treatment. It is strictly confined to the examination of the children, the discovery of defects or ailments, and the notification of the parent.

But in Liverpool, Birmingham and elsewhere, the Queen's Nurses do an excellent work in dressing sores, cuts, bruises, etc., for poor children. The carelessness, ignorance, apathy or poverty of the parents are the most formidable of all the obstacles in the way of progress in this direction as they are in every other direction. As the nation and the race are uplifted, these obstacles will be removed, as the people come to see the direct gain, even from a material point of view, of attention to children's defects and ailments. So will their negligence and apathy disappear, and as common sense and good judgment take the place of prejudice, complacent optimism, or wilful blindness, so will the value of an education which does not neglect the body for the so-called "mind" appear to all and be insisted on by all.

As Dr. Hayward, S.M.O., of Wimbledon, says: "When I was going round a class the other day, a teacher very kindly showed me some pretty nature-study drawings which the children had been making. They had specimens of silk-worms coming from eggs, and of frogs coming from tad-poles. They were learning botany, and drawing flowers and so on. I asked them what book they were reading that afternoon. It was a class of girls about thirteen years of age. They were reading Sir Thomas Malory's 'Morte d'Arthur.' A number of that class had their heads swarming with vermin. You can hardly call that a complete education."

In the last report of the medical officer for Halifax we find:



"I may cite two instances; the first is that of a child who was sent to school in her grandmother's spectacles, 'because her teacher said she needed some'; the second is that of an infant who squinted as the result of being long-sighted. When the mother received a note asking her to take the child to hospital to have the squint corrected by glasses, she was much aggrieved and said she 'smacked the child whenever she saw it squint, and what more could she do'? Comment, I think, is superfluous."

Seven results are ascribed in the Report of the Committee as already due to medical inspection:

1. Infectious disease has been lessened. Teachers possess a little knowledge of the symptoms of infectious disease, and therefore it is more quickly and effectively controlled.

It is believed that the Education Act of 1902 has, by omitting the sanitary and education authorities, facilitated prompt and effective action *re* epidemics.

2. The *morale* of the schools and the physical condition of the children have been greatly improved by the increased attention to personal cleanliness defective children have received.

3. Better care. Defects have been remedied; surgical apparatus has been obtained.

4. Great attention has been paid to eyesight,\* and many defects have been discovered and remedied, with the result of diminishing headache and apparent stupidity.

5. The question of defective hearing has received attention.

6. Teachers realize more the importance of attending to ventilation, and take more interest in the bodies of the pupils. The S. M. O. is a great help and support to the teacher.

7. Generally we feel, no doubt, that the medical inspection has done much towards bringing to view defects, the treatment of which secures the child from unnecessary suffering and may save him from serious trouble in after life. Finally, we desire to point out how small is the expenditure which inspection involves; in no urban area does it require more than 0.1d. rate, generally not so much."

These are beneficial results. There is no one interested in the welfare of our schools but would welcome such results here. The appointment of school medical officers, the closer connection between sanitary authorities and education authorities, and the provision of opportunities by which the able and conscientious men and women forming the teaching profession could avail themselves of the most modern, economical and indeed fascinating results of preventive medicine, is well worth the best efforts of the medical profession, the public, and the Government.



## OBSERVATIONS CONCERNING SOME PALMAR ERUPTIONS.

BY HENRY W. STELWAGON.

*Journal Cutaneous Diseases.*

IN this paper the author discusses some points in connection with chronic, dry, scaly phases of eczema (*Eczema seborrheicum*), and syphilis of the palmar aspects of the hands, in which the eruption seems wholly independent of recognizable external agency. They are rarely seen in his experience under 25, and seldom under 30 years of age.

The circulatory system is frequently weakened, especially from heart trouble, primary or secondary to renal trouble. There is commonly some anemia, and the patients lead a sedentary life. Females are much less liable than males. A marginate border, especially if serpentine or crescentic, excludes eczema, but not *eczema seborrheicum*. In the latter, however, the morbid process is more superficial, as a rule, yet in some syphiloderms the infiltration is very slightly marked. Scalps are so frequently seborrheic that too much stress must not be laid on the concurrence of this symptom, the presence of *eczema seborrheicum* of the trunk is more reliable. A sharply marginate, crescentic or serpiginous eruption of the palm alone is almost invariably syphilitic. A history of syphilis is suggestive, but does not definitely settle the diagnosis. Itching usually points to eczema.

These affections are very intractable. For the type of eczema referred to, salicylic acid ointment (10 to 20 per cent.), salicylic acid plaster (5 to 15 per cent.), washing with *sapo viridis*, has been recommended. In some cases the "X-ray" is very successful.

For the treatment of the chronic dry palmar syphilis, Stelwagon recommends the administration of mercury, by inunction or hypodermic injections, or in pill to enormous doses. Pot. iod. often proves very useful.

The circulation should be improved in every way possible.

D. K. S.

# The Canadian Journal of Medicine and Surgery

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NO. 5.

## Editorials.

### THE PREVENTION OF LEAD POISONING AND THE TREATMENT OF LEAD COLIC.

AUTHORITIES are pretty well agreed as to the main precautions necessary to prevent the onset of lead poisoning on the part of those exposed to it. Those employed in lead works may do much to protect themselves, or rather, their employers may do it for

them. Drs. DeLéarde and E. Dubois (of Lille), who have had large opportunities of forming accurate opinions on the etiology of lead poisoning and its treatment, contributed a timely article on this subject, which appeared in *La Presse Médicale*, February 14th, 1906. A statistic of employees in lead works or painters treated at the Charité Hospital, of Lille, from 1892 to 1905, shows the following figures:

|                   |              |                   |              |
|-------------------|--------------|-------------------|--------------|
| In 1892 . . . . . | 35 patients. | In 1899 . . . . . | 41 patients. |
| 1893 . . . . .    | 40 "         | 1900 . . . . .    | 26 "         |
| 1894 . . . . .    | 33 "         | 1901 . . . . .    | 18 "         |
| 1895 . . . . .    | 67 "         | 1902 . . . . .    | 9 "          |
| 1896 . . . . .    | 77 "         | 1903 . . . . .    | 13 "         |
| 1897 . . . . .    | 66 "         | 1904 . . . . .    | 12 "         |
| 1898 . . . . .    | 56 "         | 1905 . . . . .    | 5 up to Oct. |

—a total of 498 patients, with 4 deaths. The question is asked, "Is the progressive diminution of the number of patients due to the closing of certain lead works?" The reply is in the negative, for, if one or two factories have closed their doors, the factories doing business have increased their output in a considerable proportion. Another question asked is, "Do the manufacturers prevent their employees from going for treatment to the hospital, where the patient's disease is known, and do they oblige them to be treated at home, where the disease could be concealed?" The reply is that the physician of the two most important lead factories of Lille, who regularly examines the employees of these factories every week, informs Drs. DeLéarde and Dubois that lead colic is becoming more and more rare in these factories (11 cases of lead colic in two years).

The real reason of the change, in the opinion of Drs. DeLéarde and Dubois, is owing almost entirely, if not altogether, to the persevering efforts of some manufacturers, who have improved and perfected their methods of manufacture. To be convinced of this, one has only to visit a lead factory which is kept in good order and provided with a modern outfit. In these works the lead is ground in a machine which is covered with a wooden cage, so as to prevent the finely powdered particles of lead from being scattered through the air. Then the employees are obliged to keep their hands clean and to take hot baths frequently. A dressing room is provided for them, where their working clothes are left on leaving the factory. Gloves and blouses of linen are

worn during work by the employees who crush the white lead. The floor of the working room is frequently sprinkled with water and the ventilation of the building is very free. The employees are also shifted, so that no one remains continually for over a fortnight engaged in a particularly dangerous part of the work. Besides, an obligatory medical inspection of the employees takes place every week. In lead works where these rules are observed cases of saturnism are rare; in other factories, where they are not observed, cases of lead poisoning occur quite commonly.

An important observation made is that employees in lead works should abstain from the use of alcohol. The emunctories which suffice to eliminate from the body the lead absorbed during work in the factory, are unable to do the work when a second poison is superadded to the first.

The rarity of lead poisoning among painters or the comparative mildness of the disease in them is due to the fact that painters use white lead mixed with oil, that is to say, in a condition in which the absorption of the poison by the air passages is impossible. However, the same remarks as to cleanliness, bathing and change of clothing apply to painters and indeed to all persons who work with lead in any shape or degree. It is evident that lead-lined and painted cisterns should never be used in houses: that cosmetics and hair-dyes are dangerous, and that care should be taken in selecting canned foods not to use those which have been too long canned.

In the treatment of lead colic, Drs. DeLéarde and Dubois have broken new ground. They say: "Without denying the existence of intestinal spasm, which has been made to explain the pathogenesis of the constipation noted in lead poisoning, we think that the principal, we would be tempted to say, the only cause of the retention of fecal matter is pain located in the abdominal muscles, and more particularly at the lower insertions of the right and left rectus abdominis. Defecation cannot be accomplished without the aid of these muscles, which compress the intestinal mass and facilitate the advance of the feces. But, with each effort to bring these muscles into action, pain is increased, and as the pain is very sharp, the sufferer avoids making any efforts at defecation; instead of utilizing the action of the recti muscles, he endeavors to immobilize them.

After alluding briefly to different treatments devised by others, as well as themselves, for the relief of the abdominal pain of lead colic, they say: "Since 1901, we have used epidural injections of cocain. The dose of cocain injected varies, according to the intensity of the pain, from 1 to 3 centigrammes (.154-.462 grains), dissolved in from 2 to 4 cubic centimetres of sterile water. Two centigrammes of cocain is the dose generally used (.308 grains), and is the one we recommend. A few moments after this dose is injected into the spinal canal, pain is abolished; the patient feels a sense of general relief; he is able to rise from bed and go to the water closet. All the patients treated at the Charité Hospital in the service of Professor Combemale, had one or several stools during the twenty-four hours following the epidural injection of cocaine. We have collected observations made on 16 cases of lead colic (5 in hospital practice and 11 in private practice), and not the slightest malaise or symptom of intoxication resulted from the epidural injection of cocain in them. Ten of the sixteen patients had natural stools some hours after the cocain was injected; the other six had free movements of the bowels after the administration of purgatives; three of them had received only one centigramme of cocain (.154 grains), a dose which, in our opinion, is not sufficient to relieve severe colic. In all the cases pain disappeared in a few moments."

The treatment of lead colic by epidural injection of cocain, according to Drs. DeLéarde and Dubois, has the following advantages over older methods: Rapid disappearance of pain; almost immediate cessation of vomiting and constipation—in a word, complete cure in one or two days. Stovaine may be used instead of cocain as an epidural injection in cases of lead poisoning.

J. J. C.

#### THE UNIVERSITY COMMISSION'S REPORT.

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THE report of the Royal Commission on the University of Toronto project was presented to the Legislature, April 6, 1906. The Commission, comprising Mr. J. W. Flavelle (Chairman), Prof. Goldwin Smith, Sir William R. Meredith, B. E. Walker, Rev. Canon H. J. Cody, Rev. D. Bruce Macdonald, and A. H. U. Colquhoun (Secretary), has been six months at work getting material on which to make their recommendations.

The following brief synopsis of their report appeared in the *News* of April 7th:

"We have arrived at a critical juncture in the progress of University education.

The constitution of the University of Toronto should be completely re-cast.

The University should be entirely free from political control. The control and management of the University should be vested in a Board of fifteen Governors, chosen by the Lieutenant-Governor-in-Council, and holding office for six years.

The Senate should direct the academic interests of the University.

The School of Practical Science, the School of Medicine and the Law School should be united with the University as its faculties of Applied Science, Medicine and Law.

Appointments to the staff should be made by the Board of Governors, upon the recommendation of the President.

There should be created a Council of the Faculty of Arts, composed of the faculties of all the Arts colleges and representatives of the federated colleges, and a Council for each faculty.

The President should be the chief executive officer of the University, be elected by the Board of Governors, and be relieved of teaching duties. A caput or advisory committee should advise the President in matters of discipline.

The office of Chancellor should be retained, but that of Vice-Chancellor abolished.

The Senate should be retained with limited powers.

The Faculty of Medicine has agreed to admit women students.

In no respect should the department of Arts be permitted to fall behind.

Departments of Forestry, Pedagogy and Household Science should be instituted.

A portion of the succession duties should be devoted to the University.

The Board of Governors should endeavor to secure the removal of Trinity College to the University grounds.

An Art School and School of Music should be established.

The University Library should be extended, and a museum established.

The purchase of the Ontario Veterinary College by the Government is recommended.

A million acres of land in New Ontario should be set aside for University purposes.

The Provincial aid to the University should not be less than \$275,000 per annum at the inception."

As medical readers are principally interested in the Faculty

of Medicine, we shall confine our remarks to questions arising in connection with that part of the report. Under the arrangements proposed by the University Commission, the President of the University, who is to be *ex-officio* a member of the Faculty of Medicine, would only make recommendations to the Board of Governors as to appointments on the staff of the Faculty of Medicine, after close consultation with those best qualified to advise him. Being responsible for his recommendations, the President would have to obtain the opinions of the Medical Faculty as well as the views of others who would be in a position to advise or recommend the appointment of a candidate, not necessarily known to the Medical Faculty. The system of financial administration in the Faculty of Medicine might also be altered in some respects with advantage to all concerned. For instance, it is the opinion of the Medical Faculty that the professors of anatomy, pathology, experimental therapeutics and hygiene should be paid by the State. The professor of anatomy instructs certain students in the Arts course, as well as students of medicine. This is more particularly the case in the B. and P. course (a six years' course), through which a graduate may obtain a double qualification in Arts and in medicine. The professor of anatomy should not, therefore, look solely to the Faculty of Medicine for his fees. The professor of pathology, having to devote his whole time to the work of his department, could not engage in practice. The professor of experimental therapeutics would be also excluded from practice. The professor of hygiene would also enter into this category, so that part at least, if not all, of his salary, should be paid by the State, and should not be a charge on the finances of the Medical Faculty of the University. Very little original work has been done so far by the Faculty of Medicine in experimental therapeutics, and it is felt that original research work in this branch of medicine and in pathology should be extensively carried out. It may be that the lack of a properly organized hospital has prevented such work being undertaken; but that difficulty will soon be obviated.

The question of the medical education of women, having already been dealt with by the Senate and Faculty of Medicine of the University, need cause no difficulty, and women students will be admitted by the Faculty. The latter body has already transmitted its views to the Senate of the University, in these words:



"That in view of certain prospective changes which are suggested in connection with the method of providing instruction in medicine for women in Toronto, the Faculty of Medicine of the University of Toronto is now prepared to register female students in medicine, and agrees that whatever arrangements are deemed necessary should be made for their instruction."

Other phases of the contemplated changes in the government and management of the University of Toronto, in which medical practitioners and the Medical Faculty are interested, may crop up when the report of the commissioners is being discussed in the Legislature. In the meantime, the general scheme of reform recommended by the commission is worthy of the scrutiny and attention of all the friends of the Provincial University.

J. J. C.

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### THE UNFAVORABLE PROGNOSIS OF INSANITY IN ONTARIO.\*

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AMONG laymen, as well as physicians, a good deal of interest attaches to the answer to this question, "Is the disease curable?" If in the affirmative, human sympathy is deeply stirred; physicians make strenuous efforts to restore the patient to health. If, on the other hand, a considerable number of individuals afflicted with a disease do not regain their health, even after they have been placed in a favorable condition, interest in their fate necessarily flags.

Philanthropists sacrifice their lives in caring for the leper; physicians proffer unavailing efforts to cure leprosy. The prognosis of that disease is unfavorable, its treatment unsatisfactory. Christian charity may tender a helping hand to the leper till he breathes his last sigh, but medicine wins no laurels by his bedside.

Is insanity in Ontario an incurable disease? Scarcely so bad as that, since, during the last official year, one cure occurred in a patient who had been twenty years under treatment. Yet the published returns, which we cull from the individual reports of the medical superintendents of the eight Provincial asylums

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\*Thirty-eighth Annual Report of Inspector of Prisons and Public Charities upon the Lunatic and Idiot Asylums of Ontario, for the year ended September 30th, 1905.

for the insane in Ontario, show little ground for the establishment of a favorable prognosis in insanity. The following statistic shows the results obtained during the year ended September 30th, 1905:

|                     | Remaining in Asylums Oct. 1st, 1904. | Admitted during the year. | Total number under treatment during the year. | Discharged as recovered. | Discharged as improved. | Discharged as unimproved. | Died. | Eloped. | Transferred. | Remaining in Asylums Sept. 30th, 1905. |
|---------------------|--------------------------------------|---------------------------|---|--------------------------|-------------------------|---------------------------|-------|---------|--------------|--|
| Brockville. . . . . | 660                                  | 154                       | 814   | 55                       | 14                      | 3                         | 47    | 3       | 30           | 662                                    |
| Cobourg. . . . .    | 144                                  | 8                         | 152   | ..                       | 1                       | 1                         | 6     | ..      | 8            | 144                                    |
| Penetang. . . . .   | 149                                  | 72                        | 221   | 2                        | 1                       | ..                        | 5     | ..      | 3            | 211                                    |
| Mimico . . . . .    | 556                                  | 163                       | 719   | 44                       | 6                       | 2                         | 39    | 2       | 21           | 605                                    |
| Hamilton . . . . .  | 1003                                 | 167                       | 1170  | 45                       | 12                      | 7                         | 39    | 4       | ..           | 1063                                   |
| Kingston. . . . .   | 598                                  | 111                       | 709   | 32                       | 17                      | 10                        | 34    | 5       | 1            | 610                                    |
| London . . . . .    | 1021                                 | 190                       | 1211  | 69                       | 13                      | 6                         | 75    | ..      | ..           | 1048                                   |
| Toronto. . . . .    | 725                                  | 184                       | 909   | 68                       | 19                      | 9                         | 43    | 4       | 17           | 749                                    |
| Total . . . . .     | 4856                                 | 1049                      | 5905  | 315                      | 83                      | 38                        | 288   | 18      | 79           | 5092                                   |
| Percentage. . . . . | ..                                   | ..                        | ..  | 5.33                     | 1.40                    | .64                       | 4.87  | ..      | ..           | ..                                     |

It appears, therefore, that 5,905 insane persons were under treatment in these eight asylums during the year ended September 30th, 1905. Of that number, 315 persons, a percentage of 5.33, were discharged as cured; 83 persons, a percentage of 1.40, were discharged as improved; 38 persons, a percentage of .64, were discharged as unimproved; 288 patients, a percentage of 4.87, died. The mortality is low enough; but the number of cures is very small.

The question of the recovery, partial or complete, of an insane person is difficult to determine, depending on the cause of the malady, the temperament, disposition, education, nationality and the normal mentality of the patient. Recovery is usually gradual, rarely does sudden restoration occur and, as a result, in the breast of the medical attendant, "Hope ebbs and flows like the wave." To measure the professional skill employed in the treatment of the insane in the asylums of Ontario by the output of cures or the probational discharges of patients, improved or unimproved, would be a fallacious test. But that is just another way of saying that, in a large number of the insane of Ontario, the prognosis as to the recovery of sound mentality is unfavorable. By the exercise of admirable care and good hygiene, the lives of the insane are conserved,—but that which makes life precious is rarely restored.

In studying the reports of the medical superintendents of the eight Provincial asylums, we do not find any attempt made to classify the insane patients as belonging to the acute or chronic classes. If the term chronic mania were restricted to cases in which evidences of dementia are exhibited between the exacerbations of restlessness, excitement and destructiveness, there would be less confusion in distinguishing between acute and chronic insanity. The line which distinguishes between acute and chronic mania must always be somewhat arbitrary and unscientific. The duration of an attack of mania beyond twelve months is usually considered sufficient to determine the condition, and this may be a safe rule, since it precludes the possibility of terming the condition incurable. Adopting the time limit as an arbitrary line of division of the insane into two great categories, the acute and the chronic, one might say that patients in whom the duration of insanity, prior to admission, had extended over periods of under one month and up to twelve months, were acute cases. By the same test, patients in whom the duration of insanity, prior to admission, had been from twelve months to twenty years and upwards were chronic cases. Measured by this time test, the 1,049 patients admitted during the year ended September 30th, 1905, into the eight Provincial asylums, may be classed as follows:

| Duration of insanity prior to admission.       | Number of admissions. | Percentage of admissions in acute and chronic cases. |
|--|-----------------------|--|
| From under one month to twelve months.....     | 672                   | 64.06 per cent. acute.                               |
| Twelve months to twenty years and upwards..... | 355                   | 33.85    "    chronic.                               |
| Unknown.....                                   | 22                    | 2.09    "    not classed.                            |
|  | 1049                  | 100.00   |

A natural comment, on reading this statistic, would be that the long duration of insanity in 34 per cent. of the patients admitted into the eight asylums during the last official year would give grounds for an unfavorable prognosis.

Though the recorded cures among the insane dealt with in these reports are few, the greater number occurred among patients belonging to the class we have ventured to term acute, which appears in the following table:

| Period under treatment in Asylums.              | Number of patients discharged as cured during official year. | Percentage of total cures in acute and chronic cases. |
|---|--|---|
| Under one month to twelve months .....          | 246  | 78.09 per cent. acute.                                |
| Twelve months to twenty years and upwards ..... | 69   | 21.91 " chronic.                                      |
|   | <u>315</u>   | <u>100.00</u>   |

If we glance at a statistic showing the length of residence of patients remaining in the eight Provincial asylums, September 30th, 1905, the tendency of a great number of them to drop into the hopeless class of the chronic insane appears in a very convincing way:

| Length of residence in Asylums.                 | Patients remaining in eight Asylums, Sept. 30, 1905. | Percentage of total patients. |
|---|--|-------------------------------|
| Under one month to twelve months .....          | 725  | 14.23 per cent. acute.        |
| Twelve months to twenty years and upwards ..... | 4367   | 85.77 " chronic.              |
|   | <u>5092</u>  | <u>100.00</u>                 |

In making these calculations, the returns from the Orillia Asylum for Idiots have been omitted. Naturally one concedes that chronicity is the especial feature in the debased mentality of idiots. Our conclusion would be that the last returns of the eight Provincial asylums for the insane in Ontario show that the prognosis of insanity is most discouraging. J. J. C.

#### A PRO AND A CON IN REFERENCE TO THE NEW HOSPITAL.

THE erection of the new Toronto General Hospital is now only a question of months. The difference of professional opinion as to the right of fully qualified physicians following their patients into the wards has been adjusted on the understanding that they are pay-patients, contributing at least seven dollars per week towards their maintenance. A half loaf is better than no bread, and it's surely a long lane that has no turning. It is a step in the right direction. The hospital management have a perfect right to laws and regulations, the more the better, looking at the circumstances from one point of view. On the other hand, the

physicians of good standing have also rights that should be respected; first, on account of their scientific ability, and secondly, as many of them are men who own a good deal of property, pay the highest taxes, and thereby in a measure yearly contribute to the support of the hospital. 'Tis a pity that any question of the kind has arisen, and it is a great cause of congratulation that it has been so quickly settled. The settlement is, of course, not a compliment, but a square business deal. Some think that quite "the pound of flesh" has been extorted, in that doctors should follow only pay-patients into the hospital. A patient who can pay seven dollars a week and also his own physician could probably afford to stay at home, and employ one of Lady Aberdeen's souvenirs to perform the duties of nurse. It is often only by the most tactful, moral suasion that the physician can induce his patient, especially if from the middle classes, to enter a hospital at all. However, luckily that prejudice is passing, and we hail the better day, when the great new structure, we trust, by the saving grace of its skyline and the speaking force of its interior equipment, will educate the public to the wonderful benefit that has been conferred on them, and that it is their duty in a spirit of thankfulness to uphold the hands of those physicians who have conceived the great project and those of the lay public who have so magnificently contributed of their means and made the project a reality. Some of our medical men of Toronto feel wounded in spirit because they knocked and for a while the door remained closed, and it took the golden sesame of \$200,000 (the City's grant), to open it. Bury the hatchet. Such thoughts belong only to the smallness of life, the real thing is progress. One of the chief objects in the building of this new institution is to give the young men who are coming on, a field for clinical study and scientific research. Soon they will stand between the people of this great country and the death angel. Let all unite to give them a splendid fighting chance, and permit of fewer opportunities being given the lay press to remark in their obituary notices, "A highly successful operation was performed, but the patient died an hour later."

It is surely a great responsibility to slant the doors to students outside the University of Toronto. The Provincial Treasury has contributed the large sum of \$250,000 towards the scheme, so

that it is folly to attempt to reason that the hospital is not a Provincial institution. For that reason it seems a most arbitrary measure to say that the people are to be taxed, but not allowed to enter the hospital as students. In case, say, McMaster University should establish a medical faculty, are their students to be refused the *entrée* to the wards? It is all very well to argue that the Trustees will not exercise that right and will make regulations for the admission of outside students. They may do so and may not, but it would be better not to make it an act of grace from the Trustees, but to so word the Act now as to avoid any difficulty later. It would not be necessary to throw open wide the doors to all students, over whom the trustees would have no control, but enact that all students, no matter from what university, shall have access to the wards under certain regulations and on the payment of the fees as laid down by the Trustee Board. Where else can they so well obtain the advantages of clinical study, where learn better what knowledge really means? Oliver Wendell Holmes has tersely said, "The best part of our knowledge is that which teaches us where knowledge leaves off and ignorance begins. Nothing more truly separates a vulgar from a superior mind than the confusion, in the first, between the little that it truly knows, on the one hand, and what it half knows and what it thinks it knows on the other." May the new hospital have many latch keys, and may old Solomon in all his glory be the only door-keeper.

W. A. Y.

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#### EDITORIAL NOTES.

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**Hymeneal Incentive to the Class of 1905 (Medicine).—**We learn from an item in the *Globe*, March 13th, 1906, that a meeting of the class of 1905, Medicine, University of Toronto, was held for purposes of organization. It was decided to write to each member of the class asking for information, in order to send an annual circular letter to each member, stating the whereabouts and other items of interest of the various members. It was also decided to adopt as "class boy of 1905," the first male child born to a member of the class married subsequent to graduation. There are just a few restrictions in the terms of the "class boy of 1905." Not to mention all, girls are barred out, and besides the winning male child must be born to a member of the class subsequent to

graduation. This would be severe on a member of the class who had secured a partner and done something for Canada before being capped. However, the number of men who marry before graduation in medicine is ever a small one, so that this restriction is not likely to crop up as an injustice. As a proper incentive to the members of the class of 1905, Medicine, to assume the rosy bonds of Hymen, soon after graduation, "the class boy" hook is well baited; it is to be hoped that it will catch a good many victims, wary and unwary:

"Felices ter et amplius,  
Quos irrupta tenet copula."

**Forgetfulness of Former Friends.**—The pictures of those whom we knew a few years ago grow fainter in our minds. Not only do their conjured-up representations become less clear, but their actual living selves in a few years become unrecognizable. We change, they change, all living beings change in obedience to the mandates of inexorable life. Look at a colored photograph of yourself taken at twenty-five years of age; look again at another photograph taken when you were five-and-thirty; turn and glance at your own face reflected in a mirror and then cease to wonder that former friends and acquaintances do not recognize you.

**The Treatment of Gonorrheal Rheumatism by Anti-gonococcus Serum.**—In the *Journal of the American Medical Association*, January 27, '06, Dr. Jno. Rogers, of New York City, publishes an article on the treatment of gonorrheal rheumatism by an anti-gonococcus serum. The serum was prepared by Dr. Jno. Torrey, the bacteriologist, in the experimental laboratory of Cornell University Medical College. The serum is injected hypodermically into the subcutaneous tissue in the back of one of the upper arms of the patient in doses of min. xxx—xl. The dose may be repeated on successive days, according to the requirements of the case. A urethral injection of a silver solution is used after each miction. The anti-gonococcus serum has little or no influence on the urethritis; as long as that disease persists, recrudescence of the arthritic complications may be looked for. Dr. Rogers says: "The recrudescence of the arthritis after its apparent cure by this serum therapy, the rarity of the affection, compared with the almost universal susceptibility of the urethra,

the proved systemic resistance of man to experimental inoculation, and clinical observation that the same individual is prone to repeated attacks of arthritis with every fresh gonorrhea, all suggest some difference in the local and systemic resistance to the infection. The unfortunates who suffer from gonorrheal rheumatism must have a constitutional or congenital *deficiency of antibodies*, and, as soon as these are supplied artificially, the disease subsides." The clinical histories of eight cases of gonorrheal rheumatism treated with his serum are given to support the author's theory. As the treatment of gonorrheal rheumatism with iodide of potassium or the salicylate of sodium is a conspicuous failure, Dr. Torrey's serum will be hailed with acclaim by the entire profession. There is one point brought out in Dr. Rogers' paper that has long been known to clinicians,—the necessity of curing the patient's clap, if any progress is to be made in relieving him of his arthritic disorder. In a treatise published by William Wood & Company, New York, 1881, Richard Barwell, F.R.C.S., Charing Cross Hospital, recommended sulphocarbolate of sodium, gr. xv, every four hours in acute gonorrheal rheumatism. In such cases the same salt used as a urethral injection, viz.:

R Sodii sulphocarbolutis..... ʒ ss.  
 Hydrogenii peroxidi,  
 Aquæ ..... āā ʒ ij.

will also be found useful.

**Treatment of Eczema and Strophulus in Young Children by a Diet of Buttermilk.**—Lesné, of Paris (*Archives de Médecine des Enfants*, 1906, Janvier, t. ix., No. 1, pp. 1-9), recommends buttermilk for young children affected with eczema or strophulus. Buttermilk is easily digested on account of its low percentage in cream, and also from the very fine subdivision of the casein, which results during the butter-making. It is likewise slightly antiseptic, through the lactic acid it contains, which prevents fermentation and the putrefaction of the casein. A tablespoonful of flour and from 80 to 90 grammes of sugar being added to a liter of buttermilk, the whole is placed over a slow fire and brought to the boiling point. Thus prepared it may be used as a substitute for ordinary milk, as it has about the same calorogenic value. The alvine evacuations of children who use this diet become regular and lose



their usual fetid odor; pruritus is diminished or disappears; the rash also diminishes or entirely vanishes in a few days. It goes without saying that the regular local treatment employed in such cases should not be neglected.

**The University of Toronto Clinical Hospital.**—As was stated in this journal, July, 1905, the new hospital to be erected near the Queen's Park is to be a Provincial institution, with public and semi-private wards. It will be the clinical hospital of the Medical Faculty of the University of Toronto. All patients admitted to this hospital, who are unable to pay \$7.00 per week, will be handed over to its regular staff, which will consist of clinicians belonging to the University of Toronto Medical Faculty. Private patients paying for their own maintenance will, of course, be allowed to select their own physician. Rather than change this rule, Mr. Flavelle, chairman of the new hospital board of trustees, who appeared recently before the Toronto Board of Control, made the following statement: "You will not understand the trustees as extending any threat or seeking to exercise improper pressure when I say that, in their judgment, it would be better to refuse the generous grant which the Council made than to accept it on conditions that make the successful operation of the hospital practically impossible." This statement meant that a grant of \$200,000, voted by the Council of Toronto, to aid in purchasing a site for, and in constructing the buildings of, the new hospital, would be refused by the trustees, if the Council of Toronto were to insist that physicians not members of the staff of the new hospital should be allowed to follow their patients into the new hospital, without regard to the amount paid for the maintenance of these patients.

**Glycogen and Diet.**—In health the quantity of heat developed in an animal is in proportion to the quantity of newly-formed glycose. Every febrile disease, which provokes an abnormal expenditure of combustible material, is accompanied by a diminution of glycogen. Muscular labor also produces a great loss of glycogen, which is consumed in raising the temperature of the organism and is expended as energy. In the article on Metabolism, Nutrition and Diet (Kirke's "Handbook of Physiology," 15th American Edition), information is given by Pavy as to the

average amount of glycogen in the liver of dogs under various diets. He says:

|  |                |
|--|----------------|
| Animal food.....   | 7.19 per cent. |
| Animal Food with sugar (about $\frac{1}{4}$ lb. of sugar daily)... | 14.5     “     |
| Vegetable diet (potatoes with bread or barley meal)...             | 17.23     “    |

The dependence of the formation of glycogen on the kind of food taken is also well shown by the following results obtained by the same experimenter.

Average quantity of glycogen found in the liver of rabbits after fasting and after a diet of starch and sugar, respectively:

|   |                     |
|---|---------------------|
| After fasting for three days .....        | Practically absent. |
| After diet of starch and grape sugar..... | 15.4 per cent.      |
| After diet of cane sugar.....             | 16.9     “          |

Glycogen is also formed on a gelatine diet, but fats taken in as food do not increase its amount in the cells. The diet most favorable to the production of a large amount of glycogen is a mixed diet, containing a large amount of carbo-hydrate, but with some proteid. Glycerine injected into the alimentary canal may also increase the glycogen of the liver. Glycogen is, together with fat, an ordinary form of the alimentary reserves. It is a most manageable food and most easily disposed of; it is found in small quantities in all the tissues. The medical authorities of the German army advise that a certain amount of cane sugar be served out to the soldiers when they are on forced marches. The intention of adding sugar to the rations is to add to the store of glycogen, which is consumed in raising the temperature of the organism and is expended as energy.

**The Centennial Number of the “New York State Journal of Medicine.”**—We have looked through the Centennial number of the *New York State Journal of Medicine*, a copy of which has been sent us by the editor, James P. Warbasse, M.D., 1313 Bedford Avenue, Brooklyn, N.Y., and have been much interested in the perusal of the papers and addresses contained therein. The Centennial number celebrates the 100th Anniversary of the Medical Society of the State of New York, which in its present happy condition, may be fairly considered one of the strongest state medical associations in America. As the editor of the *New York State Journal* very properly says: “The Medical Society of the State of New York has completed a hundred years,

devoted to the highest interests of medical science—years associated with advanced thought, original research, faithful service and many honorable and honored names.” We have much pleasure indeed in establishing friendly relations with the *New York State Journal*, and shall look for its advent every month with pleasure.

**Some Views on the Prevention of Puerperal Infection.**—The treatment of puerperal infection is most successful when it is of a preventive character. It goes without saying, that nothing of an infective nature—unclean hands, catheter, douche nozzle, etc.—should be introduced into the parturient canal by obstetrician or nurse. Lacerations and bruises of the parturient canal should be looked for shortly after delivery. Minor lacerations should receive immediate treatment; major ones should be operated on in from twelve to twenty-four hours. Douching of the parturient canal should form a consecutive part of the subsequent treatment of these cases. If the injured parts are not regularly douched and kept clean, the life of the patient is in danger, greater danger, indeed, than if her lacerated perineum had not been sutured. Numberless women in all lands have suffered from laceration of the parturient canal, great or small, and have recovered their health after more or less childbed fever, nothing having been done in the way of treatment, except some cleansing of the external genitals. Observation and experience have convinced the writer of these lines that a primipara, who has received a considerable laceration of the parturient canal during labor is in a safer condition, as to her life, without prompt suturing of the wound, rather than with it, unless antiseptic douching of the injured parts is methodically carried out in the sequel. Probably one of the greatest advances made in the nursing of an obstetric case is the fact that when an obstetrician of the present day orders vaginal douching, the modern nurse is willing and ready to carry out his orders. Men of the older generation of practitioners in Ontario, who may read these lines, will remember that some of the nurses they had to deal with did not know how to give vaginal injections and others did not like to give them. In some cases of lacerated perineum in which sutures have been passed, the negligence or unwillingness of the nurse to give vaginal douches, the longing of a weak, exhausted patient for rest, or her fear of a wet bed have resulted in a conspiracy of inaction grateful to the nurse, but fatal to the patient.

J. J. C.

### PERSONALS.

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DR. A. M. ROSEBRUGH has removed his office from Shuter St. to his residence, 76 Prince Arthur Ave., near St. George St.

DR. ALEX. PRIMROSE, of 100 College St., lost by death on April 11th his father, who, for many years, had lived in Nova Scotia.

WE had the pleasure of hearing a couple of weeks ago from our collaborator, Dr. H. P. H. Galloway, now settled in Winnipeg. We are more than pleased to know that the Doctor is doing well out West, and likes his new home.

WE tender to Dr. H. H. Moorhouse, of Spadina Avenue, our sincere sympathy on his peculiarly sad bereavement last month. It is more than usually sad that so bright a boy, one who showed every sign of bright intellectual attainment, should be cut off when just budding into manhood.

DR. B. E. MCKENZIE, of this city, has been invited to give a clinic on Saturday, the 12th inst, at Detroit Medical College, and be present at the closing exercises, to be held the same day. On the 17th inst. Dr. McKenzie will attend a meeting of the National Association for the study and prevention of tuberculosis, at Washington, and take part in the discussion of a paper to be read by Dr. J. E. Goldthwait, of Boston, on "Surgical Tuberculosis."

THE American Orthopedic Association meets in Toronto on August 20th and 21st next. It is intended that the sessions will occupy but two days this year, in place of three, in order that the members may have an opportunity of fraternizing with their friends who come across the water to attend the meeting of the British Medical Association. The members of the Association will put up at the King Edward Hotel, where the meetings will be held, with the exception of a clinic, to be held at the Orthopedic Hospital.

DR. COLIN A. CAMPBELL, late Senior Resident House Surgeon Royal London Ophthalmic Hospital (Moorfields Eye Hospital), London, England, has returned to Toronto and started practice at 55 College Street. Dr. Campbell is a graduate of Trinity. He was on the House Staff Toronto General Hospital 1899-00, and after some time spent on the Pacific took up special work in Europe, and has been for the past three years Resident House Surgeon at Moorfields. Dr. Campbell is a member of the Ophthalmological Society of the United Kingdom.

# Obituary

## DEATH OF DR. W. J. DOUGLAS.

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DR. W. J. DOUGLAS, Cobourg, died suddenly while driving to visit a patient, March 29th, 1906.

W. J. Douglas was born near Norham, in 1853, being a son of Mr. Alexander Douglas, an estimable citizen of Percy Township. He graduated from Trinity Medical College, taking the gold medal for that year, when but 21 years of age. He practised for some years at Castleton, and then went to Edinburgh and London for a post-graduate course, taking his degree at Edinburgh and standing first in his class. He went to Cobourg some sixteen years ago. Dr. Douglas was a member of the Medical Council of Ontario and of the Provincial Board of Health.

He married Miss Martha Macklin, daughter of Mr. Robert Macklin, of Brighton Township, who, with one son, Alex. Macklin Douglas, Toronto, survives him. Telegrams and expressions of sympathy were received by deceased's family from friends and members of the medical profession throughout the Province, and great sorrow was felt for his loss in Cobourg. The funeral, which took place on the afternoon of March 31st, was largely attended.

## DEATH OF DR. ALEXANDER THOMPSON.

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DR. ALEXANDER THOMPSON, Strathroy, died March 31st, 1906. He was seized about midnight with an attack of angina pectoris, and attended by his son, Dr. A. Stewart Thompson and Dr. McCabe, both of Strathroy, but obtained little relief and, having a second attack towards morning, passed away about 8 o'clock. His age was 68 years and 7 months. The deceased left a widow and a grown-up family. The funeral was private, but in addition to the immediate relatives was attended by six members of the Sons of Scotland, and the Rev. Mr. McCrea, of London, who represented the Executive of the Grand Camp of the Sons of Scotland, and also by Dr. R. W. Bell, medical inspector of the Provincial Board of Health, who represented that Board.

Service was held at the house prior to the funeral and much sympathy expressed for the bereaved family. A few words were said in regard to the kindly virtues of the deceased, who, though a man of few words, was of sound judgment, his opinions, when expressed, carrying weight.

## Correspondence.

*The Editor cannot hold himself responsible for any views expressed in this Department.*

### TORONTO GENERAL HOSPITAL.

*To the Editor of THE CANADIAN JOURNAL OF MEDICINE AND SURGERY :*

*Dear Doctor.*—I have the honor to inform you that the Trustees of the Toronto General Hospital have set aside as "semi-public," two wards in the hospital (ward No. 25 for female patients, and ward No. 13 for male patients), for the reception of any cases which may be sent in by the profession at large or by fraternal societies or workmen's organizations. The practitioner or society physician, whether a member of the Hospital Staff or not, may follow his cases into these wards and treat them in the same way as he at present follows and treats cases in the semi-private and full private wards; and he may collect a fee for attendance on such cases.

The charge per patient for these wards will be \$7 per week. In these semi-private wards the patients will be provided with the same fare, nursing and general attendance as are given to the ordinary cases in the public wards. They will not be used as clinical material unless at the suggestion or with the approval of their own physicians.

If the above provision for semi-public wards is found inadequate, additional wards will be set aside for the purpose, if pressure upon the space required for public wards will permit of it.

Wards 4, 10, 11, 16, 17, 18, 19, 35 and 40 are now being used for semi-private, surgical and medical cases; wards 28 and 29 are used for semi-private eye and ear cases; wards 50 and 51 in the Pavilion, for semi-private gynecological cases, and one semi-private ward is available in the Burnside, for obstetrical cases.

A rate of \$10.50 per week is charged for all the above semi-private wards, and the patients occupying them are at liberty to have their own medical advisers. In the semi-private wards the patients receive the same fare, nursing and general attendance as are given to patients in the full private wards.

The following comprise a complete list of private ward rates:

*In Main Building.*—A \$18, B \$18, C \$16, D \$16, E \$18, F \$16, G \$16, H \$20, I \$16, J \$16, K \$18, L \$20, 8½ \$14, R \$14, S \$14 "Walker" \$30, C. M. \$30, "Morrow" \$30, O. R. \$30, "Cockshutt" \$20, 3 \$14, 20 \$14, 21 \$14, 37 \$16.

*In Eye and Ear Department.*—U \$14.

*In Surgical Pavilion.*—V \$18, W \$16, X 18, Y \$18, Z \$20,  
52 \$18.

*In Lying-in Department.*—A \$20, B \$20, C 20, D \$18, E \$18.  
For cot in semi-private ward the rate is \$10.50 per week.

Faithfully yours,

JOHN N. ELLIOTT BROWN,  
*Superintendent.*

Toronto, Mar. 27, 1906.

## *News of the Month.*

### DR. SHEARD ADDRESSES THE STUDENTS.

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DR. CHARLES SHEARD, Medical Health Officer of Toronto, addressed the final meeting of Toronto University Medical Society, on April 12th, and when introduced by President Wesley Rich, received a reception from the four or five hundred students present that indicated the popularity of the Doctor at the college.

The Doctor urged every student to aim at taking post-graduate work, visiting the great hospitals of Europe and America, and specializing on some department of medical work. The instruction at the college was very good, but it should be considered only the beginning of their course of study. Exhaustive technical education was the only way to get the requisite knowledge and skill to carry out in the most successful manner the noble work of the physician.

"Never think of remaining a general physician," he said. "If you are out of funds, take a general practice till you have saved \$5,000, then escape to some of the large centres, specialize and practice your specialty. If you have to start with a general practice, don't sink your money in real estate or fine horses, and remember Prof. Osler's advice, to keep your affections in cold storage for a decade after leaving college. Between thirty and thirty-five is early enough to marry. If you have a wife and family on your hands you won't do much post-graduate study.

"From my knowledge of London, where I spent several years, I am sure you can get started as easily there as in Toronto, and your fees would be paid in pounds instead of dollars. I know now that I was exceedingly foolish to ever leave London for Toronto."

There were many good reasons for settling in the large centres. In the first place, if a man secured any reputation at all he got huge fees for his services. That was simply because they were fashionable. The Doctor told of cases where Toronto people had gone to New York for simple professional services which could have been provided quite as well in Toronto for fully \$500 to \$1,000 less than what was paid in New York. "If people will do that kind of thing, you are foolish to object," he added.

Dr. Sheard thought the general prospects for the medical pro-



fession were still good as regards remuneration. While there was an extremely high percentage of failures in mercantile life, not more than five per cent. of the physicians who attended properly to business had any difficulty in making a good living.

Referring to the matter of temperance, his advice was as follows: "Be temperate in the broad sense. Keep away from the bar-room, tavern and billiard-room, and from all games of chance. Life is real and chance plays very little part in it."

Concluding, he said the students would find their greatest happiness by following Carlyle's advice: "Blessed is the man who findeth his work and doeth it." This was a sure cure for depression of spirit and would inspire them to true and noble action.

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### ITEMS OF INTEREST.

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**Hospital Incorporated for Consumptives.**—A bill incorporating the Toronto Free Hospital for Consumptives was reported by the Private Bills Committee, April 12th, and the usual fees remitted in view of the character of the body. The first trustees are Messrs. W. J. Gage, W. A. Charlton, H. P. Dwight, H. C. Hammond, James L. Hughes, R. H. Davies, Ambrose Kent and W. L. Wood.

**Ex-House Surgeons Dine.**—Thirty-five of the ex-house surgeons of the Toronto General Hospital dined at the King Edward on April 9th, and organized themselves into an association, with the following officers:—Hon. President, Dr. Chas. O'Reilly; President, Dr. R. B. Nevitt; First Vice-President, Dr. W. P. Caven; out-of-town Vice-Presidents, Drs. McAlpine, of Lindsay; Third, of Kingston; Hillary, of Aurora; A. Ardagh, of Orillia; Middlebro', of Owen Sound; Mullin, of Hamilton; Acheson, of Galt; D. Armour, of London (Eng.); Barker, of Baltimore; Secretary-Treasurer, Dr. J. N. E. Brown; Council, Drs. J. F. W. Ross, H. A. Bruce, P. E. Doolittle, W. N. Barnhart, W. B. Hendry. The meetings of the Association will be yearly, at which one of the ex-house surgeons will deliver an address. Dr. L. F. Barker was elected to deliver the first address.

**Queen's Convocation.**—The only feature in connection with Queen's medical convocation on April 12th was the conferring of the honorary degree of Doctor of Laws upon Dr. C. K. Clarke, Superintendent of Toronto Asylum for the Insane. Dr. Clarke was presented to Chancellor Fleming by Prof. Shortt, who eulogized the life-work of Canada's leading alienist. In addressing

the graduating class Dr. Clarke pointed out that the aim of the graduate of medicine should be to acquire a broader culture than is ordinarily the case with Canadian physicians. Graduates were urged to become broad-minded physicians before specializing as surgeons. Regarding Government aid to Queen's, Dr. Clarke said that merely improved the position of Toronto University. There should be no petty bickerings, he said, in the discussion of broad educational policies. Short addresses were also delivered by Dean Connell and Principal Gordon. The former stated that Queen's medical registration this session was 223, greater than ever before.

**Enlargement of Grace Hospital.**—It is proposed to build a wing to Grace Hospital and in that way double its accommodation for patients. Property to the north of the present building on Huron Street as far as Division Street has been purchased and the sum of \$50,000 towards the necessary \$200,000 already subscribed.

**Queen's Graduates.**—On April 9th, Queen's Medical College issued the list of graduates and passmen. There were 47 graduates, comprising the following:—A. E. Baker, Black Falls, Sask.; W. H. Ballantyne, Kingston; J. A. Barnes, Kingston, Jamaica; A. M. Bell, Moscow; E. Bolton, Phillipsville; F. J. Brandock, Northport, N.S.; H. Cochrane, Sudbury; G. L. Cockburn, Sturgeon Falls; C. B. Dean, Bridgetown, Barbadoes; D. G. Dingwall, W. F. Gavin, Lancaster; G. D. Gordon, C. W. Graham, B.A., Kingston; J. Johnston, B.A., Combermere; W. G. Leadley, C. A. Lawlor, Kingston; S. L. Lucas, Kingston, Jamaica; F. E. Lowe, Adelphi, Jamaica; S. McCallum, M.A., Brewer's Mills; J. P. McCormick, Ottawa; D. J. McDonald, Whycoconagh, N.S.; A. G. McKinley, Chapelton, Jamaica; D. McLellan, Forester's Falls; F. R. Nicoll, B.A., Kingston; F. J. O'Connor, Long Point; W. M. R. Palmer, Northcote; R. K. Paterson, Renfrew; W. E. Patterson, Newburgh; W. R. Patterson, L. L. Playfair, C. A. Publow, Kingston; H. O. Redden, Ernestown; J. Reid, Renfrew; A. D. C. Robb, Nashville, Tenn.; B. A. Sandwith, Whitstable, Eng.; F. F. Saunders, Rhinebeck, N.Y.; S. S. Shamon, Kingston; S. H. Smith, Chambers; J. B. Snyder, Lancaster; W. E. Spankie, Wolfe Island; J. R. Stewart, B.A., Waba; E. M. Sutherland, B.Sc., B. C. Sutherland, Montreal; W. J. Taugher, Beachburg; C. P. Templeton, Napanee; J. J. Wade, Balderson; D. M. Young, Bristol, Que.

# *The Physician's Library.*

## BOOK REVIEWS.

*Nursing.* By ISABEL HAMPTON ROBB. Cleveland: E. C. Koeckert. 3rd Edition. 1906.

Mrs. Robb, a Canadian lady, and a graduate of Bellevue (N. Y.) Hospital, formerly Superintendent of the Illinois Training School for Nurses, Chicago, and later of the Johns Hopkins Hospital Training School for Nurses, Baltimore, is an authority on nursing, and the third edition of her well-known text-book will be welcomed by the profession. A good many changes have been made, upwards of 50 pages being added, and part of the work being re-cast. In particular, an outline of a three years' hospital course replaces the two years' course formerly given, and great attention has been bestowed on the completeness of the book. Altogether it is one of the best text-books on nursing in existence.

H. MACM.

*Physicians' Pocket Account Book.* By J. J. TAYLOR, M.D. Published by The Medical Council, 1105 Walnut Street, Philadelphia, Pa.

This little book contains within its first few pages sufficient business suggestions to make it worth its value alone, suggestions which, whether copied word for word, as given in this book, or used as suggestions, are of the utmost importance. For instance, as a short way of expressing one's feelings to a patient who has not responded as rapidly as perhaps he should to his account, take this: "I have done my part; don't you think you should now do yours?" The advice, too, given to the young practitioner is very valuable. "Render honest, efficient service, full measure, and then charge and collect an honest fee for it." "You must be supported by your patrons or the time will come when you can no longer render services at all." "The difference between a successful physician and an unsuccessful one, in a financial sense, is often only the difference between a good collector and a poor one."

The book is practically a day-book; the name of the patient and his address at the top of the page; the year, month and date, person to whom service is rendered, description of service, debit and credit columns—this makes up each page, besides which there

is sufficient room in which to enter a certain number of balances due and brought forward to this book.

The obstetric record is practically all that the Registrar-General could ask for. The cash account at the end of the book is large enough for the average man to keep some record of what he receives and what he spends throughout the year. Altogether, this little book is a decided improvement on some that we have seen, and if properly used will be of the greatest value to every busy practitioner.

A. J. J.

*The Divine Fire.* By MAY SINCLAIR. Toronto: McLeod & Allen.

A clever book in its way, but to a medical man a somewhat exhaustive clinic on the poetic temperament as found in a young man, the son of a London book-seller. The authoress evidently does not believe in anesthetics and sharpens her knife in full view of her victim, he meanwhile making his own remarks and giving his diagnosis of his own case. "The Divine Fire" is the name given by mutual consent to the disease; the value of the fuel consumed is underestimated by both. The gold is sifted occasionally, but only the dross measured, and the fire is too often poked to allow those who sit by it time for any golden fancies.

W. A. Y.

*Lectures on Auto-Intoxication in Disease, or Self-Poisoning of the Individual.* By CH. BOUCHARD, Professor of Pathology and Therapeutics; Member of the Academy of Medicine, and Physician to the Hospitals, Paris. Translated, with a preface and new chapters, added by Thomas Oliver, M.A., M.D., F.R.C.P., Professor of Physiology, University of Durham; Physician to the Royal Infirmary, Newcastle-upon-Tyne; Formerly Examiner in Medicine, Royal College of Physicians, London. Second revised edition. Philadelphia: F. A. Davis Company, 1906.

We owe to Dr. Oliver a deep debt of gratitude for so ably presenting to us English-reading people the second revised edition of Professor Ch. Bouchard's admirable lectures on this fascinating and all-important subject. We find the meaning of the French text has been most fluently rendered into English. The chapters on the "Toxicity of Urines," perhaps stand out as particularly bright stars in a heaven of radiant meteors; but his lectures on typhoid fever and cholera contain many points of every-day interest and suggestions of considerable value from a therapeutic standpoint. The author's views on uremia are quite original and worthy of much consideration.

The subject of intestinal antisepsis is fully and lucidly dis-

cussed. Beta naphthol and salicylate of phenol are the drugs most favorably spoken of.

The discussion on the important part played by auto-intoxication in mental diseases is particularly interesting just now, as this subject is attracting universal attention. Although in these thirty-two lectures the author deals extensively with the entrance of poisons *ab extra*, yet he does not treat at any length with the question of how the body protects itself against the invasion of microbes. This important phase of the question is, however, ably handled by the translator in an appendix. W. H. P.

*Practical Dietetics, with Reference to Diet in Disease.* By ALIDA FRANCES PATTEE, Graduate Boston Norman School of Household Arts; Late Instructor in Dietetics, Bellevue Training School for Nurses, Bellevue Hospital, New York City; Special Lecturer at Bellevue, Mount Sinai and the Hahnemann Training Schools for Nurses, New York City. Third Edition. New York City: A. F. Pattee, publisher, 52 West Thirty-ninth Street.

There has not been enough attention paid in our Canadian hospitals by either physicians, students or nurses to the question of diet in its relation to disease. In our large hospitals, both in Toronto and elsewhere, the nurses have not been properly and systematically trained in this respect prior to graduation. With the advent of a new hospital an additional incentive will be given no doubt to progressiveness in this matter. The author is decidedly practical and experienced, and the price of the book (one dollar) is within the reach of all.

It is, therefore, to be commended for perusal by nurses, physicians, students, and the intelligent housewife. The diet in infancy, and the dietaries for young children, and the pregnant woman, are given special attention, while the list of recipes alone is sufficient to make the work valuable as a text-book, or for a reference library. E. H. A.

*Neurotic Disorders of Childhood.* Including a study of Auto and Intestinal Intoxications, Chronic Anemia, Fever, Eclampsia, Epilepsy, Migraine, Chorea, Hysteria, Asthma, etc. By B. K. RACHFORD, M.D. New York: E. B. Treat & Co., 241-243 West 23rd Street. 1905.

Rachford in this work has done a real service for the medical profession. He writes on a subject which has received but little attention, and yet the matters dealt with are such as come frequently to the attention of every busy and observant practitioner. The fact that children are predisposed to such neuroses as con-

vulsions, epilepsy, hysteria and incontinence of urine is recognized by everyone, who may often, however, find himself at a loss to give a sufficient reason for the complex conditions which demand analysis in order that intelligent treatment may follow. In this work he will find a rational explanation. The author has evidently made a very careful study of the subject of development and the explanations given are based upon sound biological and physiological bases. So much of our work is necessarily empirical that it is a great satisfaction to have true, scientific reasons given when they can throw light upon clinical conditions.

While it is a real satisfaction to utter words of commendation regarding the author's part, one may also say that the publishers have done ample justice in the way of paper, binding and printing. The book is one that will add very materially to the value of the physician's library.

B. E. M.

*The Jungle.* By Upton SINCLAIR. Toronto: McLeod & Allen, publishers. Cloth or paper.

A book of horrors. A story of the Chicago stock-yards, written with the awful brutality of naked fact, and with the compelling force of truth. The facts woven into a story of the life of a family of Lithuanians who land in the city of Chicago hopeful, healthy and willing, even eager to work. They get employment in the stock-yards. As the tale unfolds, their lives become a delirium of terrible drudgery, their prospects for the future as black as hell. One may well ask, "Does the author who sees it all so plainly offer any solution of this ghastly problem?" Let every physician interested in unfortunate humanity read and ponder.

W. A. Y.

*Essentials of Materia Medica, Therapeutics, and Prescription Writing.* By HENRY MORRIS, M.D., College of Physicians, Philadelphia. Seventh edition, thoroughly revised. By W. A. BASTEDO, Ph.G., M.D., Instructor in Materia Medica and Pharmacology at the Columbia University, College of Physicians and Surgeons, New York City. 12mo, 300 pages. Philadelphia and London: W. B. Saunders & Company. Canadian Agents: J. A. Carveth & Co., Limited, 434 Yonge Street, Toronto. 1905. Cloth, \$1.00 net.

The student cannot find a better or more practical work on Materia Medica, Therapeutics and Prescription Writing than this little essentials from the press of W. B. Saunders & Company. But, then, this work is no exception in this respect to all the other numbers of this excellent series of compends. Dr. Bastedo, in revising the book for this seventh edition, has brought

it in accord with the new (1905) pharmacopeia, introducing all the new remedies, and carefully indicating their therapeutic doses and uses. For a work of three hundred pages it contains a mine of information so presented as to be easily grasped. We give it our unqualified endorsement.

W. J. W.

*Diseases of Metabolism and of the Blood, Animal Parasites, Toxicology.* Edited by RICHARD C. CABOT, M.D., Instructor in Clinical Medicine in the Medical School of Harvard University. An authorized translation from "Die Deutsche Klinik," under the general editorial supervision of JULIUS L. SALINGER, M.D. New York and London: D. Appleton & Company. 1906.

This is one of the Manuals of Modern Clinical Medicine being issued at present by the Appletons, and deals with the subject of constitutional diseases, such as indicated by the title. These subjects are very scantily treated in any medical work in English and therefore this volume will prove of great use to the English-speaking profession generally. The subjects are treated from a rational point of view, both as to symptomatology and treatment, and the writers wisely confine themselves to discussing thoroughly certain aspects of each disease. Diabetes Mellitus, by Naunyn, is an especially interesting article. So far as the reviewer has been able to examine the other articles, they are excellent, and the work can be commended to all who desire to read an intelligent discussion of these subjects.

A. M.P.

*A Treatise on Surgery.* In two volumes. By GEORGE R. FOWLER, M.D., Examiner in Surgery, Board of Medical Examiners of the Regents of the University of the State of New York; Emeritus Professor of Surgery in the New York Polyclinic, etc. Two imperial octavos of 725 pages each, with 888 text illustrations and 4 colored plates, all original. Philadelphia and London: W. B. Saunders Company. Canadian Agents: J. A. Carveth & Co., Limited, 434 Yonge St., Toronto. 1906. Per set: Cloth, \$15.00 net; half morocco, \$17.00 net.

We have been looking forward to the appearance of this work with the greatest expectations, for Dr. Fowler's endeavors in the field of practical surgery have been such as to stamp his writings with unquestionable authority. It is not too much, indeed, we feel it is too little to say that our expectations have been fully realized. The work is a masterpiece. It is an accurate, up-to-date treatise on surgery, skilfully presented. This entirely new work presents the science and art of surgery as it is practised to-day. The first part of the work deals with general surgery, and

embraces what is usually included under the head of principles of surgery. Special attention is given to the subject of inflammation from the surgeon's point of view, due consideration being accorded the influence of traumatism and bacterial infection as the predisposing and exciting causes of this condition. Then follow sections on the injuries and diseases of separate tissues, gunshot injuries, acute wound diseases, chronic surgical infections (including syphilis), tumors, surgical operations in general, foreign bodies, and bandaging. The second part of the work is really the clinical portion, devoted to regional surgery. Herein the author especially endeavors to emphasize those injuries and surgical diseases that are of the greatest importance, not only because of their frequency, but also because of the difficulty of diagnosis and the special care demanded in their treatment. Throughout special attention has been given to diagnosis, the section on laboratory aids being unusually excellent. The text is elaborately illustrated with entirely new and original illustrations, and evidently neither labor nor expense has been spared to bring this feature of the work up to the highest standard of artistic and practical excellence.

*The Ophthalmoscope and How to Use It.* By JAMES THORINGTON, A.M., M.D., Professor of Diseases of the Eye in the Philadelphia Polyclinic. 73 illustrations, 12 colored plates. Philadelphia: P. Blakiston's Son & Co. 1906.

After all, the way to learn to use the ophthalmoscope is to use it. No amount of theory can take the place of practice, but theory can smooth over some of its rough places. Necessarily a knowledge of the use of the ophthalmoscope implies the interpretation of the appearances of the eye-ground both in health and in disease. It is somewhat difficult to preserve a just balance, not to say too little or too much, and in this Thorington has succeeded.

J. M.

*Urinary Analysis and Diagnosis by Microscopical and Chemical Examination.* By LOUIS HEITZMANN, M.D., New York. Second revised and enlarged edition, with one hundred and thirty-one illustrations, mostly original. New York: William Wood & Co. 1906.

The second revision of this work appears after six years. In it the author has endeavored to simplify the methods and tests in the chemical examinations, leaving out the more complicated ones.

He has laid great stress upon the microscopical examination, and especially microscopical diagnosis; the especial feature of this most important branch of the subject is the numerous full-page



illustrations, which have been carefully selected and made directly from specimens in the author's possession; they should prove of the greatest practical value. The matter is well arranged for ready reference. The highest praise is due the publishers, Messrs. Wm. Wood & Co., for the excellent style in which the book is finished.

W. H. P.

*Nasal Sinus Surgery with Operations on Nose and Throat.* By BEAMAN DOUGLASS, M.D., Professor of Diseases of the Nose and Throat in the New York Post-Graduate Medical School and Hospital. Illustrated with 68 full-page half-tone and colored plates, including nearly 100 figures. Royal octavo, 256 pages. Bound in extra cloth. Price, \$2.50 net. Philadelphia: F. A. Davis Co., publishers, 1914-16 Cherry Street

One of the most perplexing and troublesome conditions the practitioner meets with is that of suppuration in the accessory sinuses of the nose. The difficulty of complete illumination of the parts, the small size of the space available for manipulation, render exact localization of the source of the pus a perplexing problem appreciated the more fully the oftener one attempts it. A special work on the anatomy of the parts and on the methods of manipulation necessary for diagnosis and treatment is therefore much to be desired. Every effort has been made in the present book, both by illustration and by verbal explanation, to make clear the intricacies of the subject.

J. M.

*A Text-Book on the Practice of Gynecology.* For Practitioners and Students. By W. EASTERLY ASHTON, M.D., LL.D., Fellow of the American Gynecologic Society; Professor of Gynecology in the Medico-Chirurgical College of Philadelphia. Second edition, revised. Octavo of 1079 pages with 1046 original line drawings. Philadelphia and London: W. B. Saunders Company. Canadian Agents: J. A. Carveth & Co., Limited, 434 Yonge Street, Toronto. 1906. Cloth, \$6.50 net; half morocco, \$7.50 net.

The fact that two editions of Dr. Ashton's new work have been required in the short period of six months indicates beyond a doubt that the medical profession was quick to appreciate the practical merits of the book; indicates that the general practitioner wants a treatise on gynecology that does not assume him to be an expert gynecologist, but rather describes in detail, not only what should be done in every case and emergency, but also precisely *how to do it*. Owing to the short time that has elapsed since the appearance of the first edition, and also from the thorough manner in which Dr. Ashton handled his subject originally, the

changes in this edition are necessarily few in number and limited chiefly to the correction of a few typographic errors and the alteration of several of the illustrations. In reviewing this new edition we cannot refrain from again speaking of the very practical illustrations. There are 1046 of them, all original line drawings made especially under Dr. Ashton's personal supervision, from actual apparatus, living models, dissections on the cadaver, and from the operative techniques of other authors. All superfluous anatomic surroundings are eliminated and the operations and procedures are detailed step by step with a clearness and accuracy we have never before seen. Certainly, the success the work has won is well deserved and fully to have been expected.

*A Laboratory Manual of Physiological Chemistry.* By ELBERT W. ROCKWOOD, M.D., Ph.D., Professor of Chemistry and Toxicology and Head of the Department of Chemistry in the University of Iowa, etc. Second edition, revised and enlarged, with one colored plate and three plates of microscopic preparations. Large 12mo, 229 pages, extra cloth. Price, \$1.00, net. Philadelphia: F. A. Davis Co., publishers, 1914 Cherry St.

This is a very handy manual for practical work in the laboratory. The directions for making the experiments are plain and easily understood, and the facts observed are briefly yet clearly described.

The text-matter of the more important experiments is printed in larger type in order to make the course flexible, and give the student a better idea of the relative value of the various topics.

A. E.

*The Food Factor in Disease.* Being an Investigation into the Humoral Causation, Meaning, Mechanism, and Rational Treatment, Preventive and Curative, of the Paroxysmal Neuroses (Migraine, Asthma, Angina Pectoris, Epilepsy, etc.), Bilious Attacks, Gout, Catarrhal and other Affections, High Blood-Pressure, Circulatory, Renal and other Degenerations. By FRANCIS HARE, M.D., Late Consulting Physician to the Brisbane General Hospital; Visiting Physician to the Diamantina Hospital for Chronic Diseases, Brisbane; Inspector-General of Hospitals for Queensland. In two volumes. London, New York and Bombay: Longmans, Green & Co., 39 Paternoster Row, London. 1905. Cloth, 30s., net. Pp. 497-535.

The physiological uses and actions of food are first considered, the nitrogenous as structural or reparative and the carbonaceous as strictly a fuel and more likely to accumulate in the blood than

the former. The income of carbon to the blood and the regulation of income by physiological, and to some extent by pathological methods, is next dealt with, and the methods by which the carbon is got rid of. Consideration is then devoted to a theory that under certain conditions carbonaceous material accumulates in the blood to a pathological extent, and this state the author designates "hyperpyremia," and proceeds to argue in favor of his theory. Other chapters are devoted to the various conditions and processes antagonistic to hyperpyremia, the mechanism and causation of some of the paroxysmal neuroses, the relation between pyremia and uric acid and clinical aspects of hyperpyremia and its resultant degeneration. Attention is given to general considerations of treatment, and the work closes with an appendix of cases well illustrating the contentions of the able writer, who is to be congratulated upon the enormous mass of most valuable material collected from varied sources and made available for reference. Deduction is the key-note of the work.

The work may be recommended as one that will amply reward careful perusal; it can not be merely skimmed through. It will be a welcome addition to the library of every thoughtful practitioner; the consultant will find it especially valuable, while the clinician will fairly revel in its wealth of illustrative material.

C. R. D.

*Gall-Stones and Their Surgical Treatment.* By G. A. MOYNIHAN, M.S. (Lond.), F.R.C.S. Second edition, revised and enlarged. Philadelphia and London: W. B. Saunders & Co., publishers. Canadian agents: J. A. Carveth Co., Ltd., Toronto.

The second edition of Moynihan's work on gall-stones has just appeared. Besides many new illustrations and case records, a new chapter, entitled "Congenital Abnormalities of the Gall-bladder and Bile-ducts," has been added. In dealing with this subject the author does not take up more space and time than the comparatively rare occurrence and slight importance clinically would justify. The chapter is clear, well illustrated, and to the point. The cuts showing the variations in the termination of the bile-ducts should be of special interest to surgeons.

Probably the best section of the book is that which deals with the etiology of gall-stones and the pathological conditions which may result from their presence. For his descriptions and conclusions in regard to this subject, Mr. Moynihan has drawn, not only from his own practical experience, but also from the experiments and observations of the gall-stone students of the world. His treatment of the subject is so clear, and told with so much interest, that a solid foundation is laid for the complete understanding and

thorough appreciation of the next section—that dealing with the symptoms and signs of gall-stone disease in all its variations.

In taking up the operative treatment, the same thoroughness is present. Not only does he describe each operation with the greatest detail and clearness, but he also allots considerable space to the description of the preparation of the patient and surgeon in the light of modern aseptic and antiseptic methods.

F. N. G. S.

*A Text-Book on Modern Materia Medica and Therapeutics.* By A. A. STEVENS, A.M., M.D., Lecturer on Physical Diagnosis, University of Pennsylvania; Professor of Pathology, Woman's Medical College of Philadelphia. Fourth edition, revised. Octavo of 670 pages. Philadelphia and London: W. B. Saunders & Company. Canadian Agents: J. A. Carveth & Co., Limited, 434 Yonge Street, Toronto. 1906. Cloth, \$3.50 net.

The new fourth edition of Dr. Stevens' excellent work on practical therapeutics appears at a most opportune time, close upon the issuance of the Eighth Decennial Revision of the Pharmacopeia to which it has been adapted. Dr. Stevens, by his extensive teaching experience, has acquired a clear, concise diction that adds greatly to his work's pre-eminence. New articles have been added on Scopolamin, Ethyl Chlorid, Theocin, Veronal and Radium, besides much new matter to the section on Radiotherapy. The numerous changes in name or strength of various drugs and preparations, as called for by the new Pharmacopeia, have also been made. In fact, it is somewhat difficult to speak of Dr. Stevens' Therapeutics without resorting to the frequent use of superlatives, for of all the good works on this most important of subjects, this book before us is undoubtedly the very best.

*Manual of Chemistry.* A Guide to Lectures and Laboratory Work for Beginners in Chemistry. A Text-Book Specially Adapted for Students of Medicine, Pharmacy and Dentistry. By W. SIMON, Ph.D., M.D., Professor of Chemistry in the College of Physicians and Surgeons of Baltimore, and in the Baltimore College of Dental Surgery. Eighth edition, thoroughly revised. Philadelphia and New York: Lea Brothers & Co. 1905.

In a department of knowledge, like chemistry, where the advances are so rapid, it is difficult for text-books to keep up with current investigations. The eighth edition of this manual has been thoroughly revised and brought up-to-date in all parts. Several of the chapters have been rewritten, their contents being rearranged in order to conform to modern views.

The work aims to furnish to the student of general science a clear presentation of the facts pertaining to chemistry. At the same time prominence has been given to facts which are of direct interest to the physician, pharmacist and dentist.

A number of experiments have been given, which may be made in the laboratory with a comparatively small outfit of chemical apparatus.

A. E.

*The Diseases of Infancy and Childhood*. Designed for the Use of Students and Practitioners of Medicine. By HENRY KOPLIK, M.D., Attending Physician to the Mount Sinai Hospital; Formerly Attending Physician to the Good Samaritan Dispensary, New York; ex-President of the American Pediatric Society; Member of the Association of American Physicians, and of the New York Academy of Medicine. Second edition, thoroughly revised and enlarged. Illustrated with 184 engravings and 33 plates in color and mono-chrome. New York and Philadelphia: Lea Bros. & Co. 1906. Canadian Agents: Chandler, Ingram & Bell, Toronto; Chandler & Fisher, Winnipeg; Chandler & Mills, Montreal.

In the second edition of his book, Dr. Koplik has brought his book "abreast of the advances of the past few years." The author has not been satisfied to revise an odd chapter; but on the other hand, has gone through the volume and almost rewritten it in its entirety. The section on Infant Feeding covers nearly 90 pages, and is worthy of the most careful perusal. In this section Dr. Koplik takes up not only Food Preparations, Artificial Infant Foods, the pasteurizing and sterilizing of cow's milk, etc., etc., but goes into the details of the home preparation of modification of milk for infant feeding, the method of calculating percentages of fats, proteids and sugar, when shall food be peptonized, the whey method of modification of cow's milk, when is the bottle-fed infant thriving, Biedert's mixture, the Rotch method, etc., etc.

Koplik's *Diseases of Infancy* may be fairly considered quite a valuable addition to the literature devoted to pediatrics now in print

A *Treatise on Diagnostic Methods of Examination*. By PROF. DR. H. SAHLI, of Bern. Edited, with additions, by FRANCIS P. KINNICUTT, M.D., Professor of Clinical Medicine, Columbia University, N.Y.; and NATHANIEL BOWDITCH POTTER, M.D., Visiting Physician to the City Hospital and to the French Hospital, and Consulting Physician to the Manhattan State Hospital, N.Y. Octavo of 1,008 pages, profusely illus-

trated. Philadelphia and London: W. B. Saunders & Company. 1905. Canadian agents: J. A. Carveth & Co., Ltd., 434 Yonge Street, Toronto. Cloth, \$6.50 net; half morocco, \$7.50 net.

The publication of Dr. Sahli's work, translated from the German, has been awaited by the profession in this country with a good deal of pleasure. W. B. Saunders & Co. are to be congratulated upon their enterprise in this connection, and, judging from a few evenings' study of Dr. Sahli's treatise, we bespeak for it a large sale. The work is, to say the least of it, thorough and exhaustive, the author giving with much detail the different methods of examination necessary to make a correct diagnosis. Dr. Sahli has treated *in extenso* the examinations of the stomach, blood, feces and sputum. In the chapter on examination of urine, a good deal of new material is given, including Seliwanow's reaction for levulose, Bial's test for pentoses, quantitative determination of urochrome after Klemperer, osmotic pressure and cryoscopy of the urine, and the different methods of staining pigments. The American edition appears simultaneously with the new fourth German edition.

# The Canadian Journal of Medicine and Surgery

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## *Original Contributions.*

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### HIGH VASCULAR TENSION.\*

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BY WILLIAM F. WAUGH, A.M., M.D.,

*Emeritus Professor of Practice, Illinois Medical College, Chicago, Ill.*

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ONE who endeavors to keep up with the medical literature of the day can scarcely fail to be impressed with the attention being given to the subject of abnormally high vascular tension. Two decades ago the text-books hardly mentioned it, or did so casually, as a curious phenomenon; now it seems to engage the attention of the leading clinicians, the men whose articles are always too important to be neglected. As a type of the publications the writer has in mind may be mentioned the fine address given by Osborne at the Section on Pharmacology two years ago.

Abnormal vascular tension is a danger signal, directing attention to the presence of some condition that is irritating the heart, exciting it to undue action, or increasing its labors to an abnormal extent. The cause is some agent that directly irritates the walls of the arterioles and capillaries, increasing their contractile force, or else produces such increased contractility through irritations of the nervous centres, or the nerve trunks. The differentiation is yet to be made, and probably will wait till a new Virchow arises to redirect attention to the study of cell function, and the painfully slow progress of physiology, pathology and toxicology enables us to recognize the disordering effects of each toxic principle.

Wherever the action may be exerted, we know that the symptom is due to the circulation of certain toxic matters in the blood, toxins introduced from without, generated in the body, in

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\* Written especially for THE CANADIAN JOURNAL OF MEDICINE AND SURGERY.

the exercise of its normal metabolic processes, or absorbed from the storehouse of evils in the alimentary canal. We look for excitants, therefore, to the cachexia, syphilitic pladmal, gouty, strumous, dartrous, saturnine, glycemie; to any defects in the excretory apparatus or their functions; to retention and decomposition of the contents of the alimentary canal and the establishment of a reversed osmotic current, from the lower bowel to the blood, instead of the normally directed one from the blood to the bowel. The first group of causes, and the third, require their own consideration; we seek especially to consider here the treatment of the second group, where we have abnormal tension as the result of defective elimination.

The gradual surcharging of the blood with toxic matters is evidently due to the inability of the excretory apparatus to cope with the tasks placed upon them, and this may be due to an increase of the tasks, or to deficiency in the powers of the organs of elimination. In time we are brought to face both, as the continued demand for excessive service induces disorder, exhaustion and connective hyperplasia.

The primary indication is to so apply the laws of personal hygiene as to reduce to the lowest possible limit the task that is imperatively and unavoidably placed upon the eliminants. The diet must be arranged, the occupation and personal habits brought into line, all necessary sources of irritation and strain removed. The bowels are to be thoroughly emptied and kept clean and aseptic; the osmotic current maintained in the proper direction; the cachectic toxins swept out and their sources removed. This leaves us to deal with the symptom of tension itself.

The effects of high vascular tension are in themselves disastrous, and by constricting the lumen of the small vessels it interferes with nutrition and elimination, retaining the blood uselessly in the venous receptacles, and allowing a diminished supply to flow through the arteries for aeration and for the general nutrition, while the diminution of the supply to the eliminant organs lessens their excretion and increases the toxemia that gives rise to tension. A vicious circle is thus established, and this renders the tension a primary object for therapeutic attack.

The ideal remedy for this indication should of course be absolutely uniform in its nature and strength; its effects always the same as to quality and quantity of action. As the condition is a continuous one, the remedy should be capable of affording an effect that may be maintained over prolonged periods. It should relax vascular tension, open the doors of elimination, should not weaken the heart unnecessarily, or interfere with nutrition, or antagonize any other treatment necessary to meet leading indica-



tions. Finally, it must be a drug from which no disastrous habit can be formed.

Potassium iodide has been employed largely. The potash is itself toxic, the iodine causes emaciation, stimulates waste, and except when otherwise indicated by a cachexia coming under its influence is not advisable. The relaxant powers of this salt are uncertain and indirect.

The nitrites are the agents almost universally utilized for the purpose under discussion. Their power is unquestioned, it is quickly manifested and speedily subsides. They are ideal agents for sudden emergencies, but their effect can be maintained only doubtfully, and then by a multiplication of rapidly repeated doses that may be all right in an emergency, but would be intolerable in a chronic affection such as this. Their effect upon the eliminant apparatus is similarly evanescent. Even if they could be administered continuously for months and years, it is uncertain that no untoward effects would ensue.

When we come to veratrine we find in it an agent that amply fulfils every item of the complicated indication. Veratrine is uniform in its composition and unvarying in its action; by its use continuous relaxation of vascular tension has been maintained for eighteen months, and may be maintained for years if desirable with a few daily doses, without any sort of injury, immediate or remote. It relaxes vascular tension, stimulates elimination by the kidneys, liver, bowels, skin and lungs; in the small doses employed it strengthens the heart muscle directly as well as controlling its rate and rhythm by strengthening inhibition; it does not antagonize any other treatment that may be required, or interfere with nutrition in any other manner than by sweeping away the waste that blocks the channels, and it does not create any drug habit. Really, it seems that if we had had a drug made to order we could not have improved upon veratrine. It is about the safest medicinal agent in the materia medica, for it provides for its own elimination, and possesses a remarkable safeguard against possible overdosing. While in excessive doses veratrine depresses the heart, it irritates the stomach and bowels to such a degree as would necessitate its discontinuance, while yet given in doses far below the danger line. To do serious harm with veratrine would argue a depth of ignorance and carelessness that we would not willingly acknowledge to be possible in the medical profession. Even the accidental taking of an excessive dose carries with it the antidote in the gastric irritation it would cause.

Why, with all these advantages, is veratrine not universally employed for this indication, for which it is so admirably designed?

Turn to the last edition of the *Pharmacopœia*, page 498, and

you will see that the official veratrine is a mixture of alkaloids from *Asagrea officinalis*, not the pure single alkaloid to which my article has reference. Such a mixture is necessarily of uncertain composition since the alkaloids do not exist in exactly the same quantities and proportions in all specimens of the plant. The compilers of the Pharmacopeia evidently did not consider veratrine as a remedy for internal administration, but one solely for external application, for which the said mixture may answer. Still, they appended a dose, which, if applied to the dispensing of the pure alkaloid, offers a further explanation of the neglect of veratrine—"Average dose, two milligrams, gr. 1-30."

The average adult dose of pure veratrine to begin with is gr. 1-134, repeated every one to four hours. Many persons cannot take this amount without irritation of the stomach, unless the dose be given well-diluted. It should always be given in solution—a small dose may irritate if it comes in substance in contact with any mucous membrane. Irritation is manifested by a sense of warmth in the stomach, by which the outlines of that viscus are marked out to the patient's consciousness. Larger doses cause nausea, vomiting, and even doses of gr. 1-40 at bedtime will occasion a perceptible action of the bowels next morning.

When the exact daily dose has been ascertained, the quantity that will relax tension to the extent desirable in the case, the veratrine may be concentrated in three or four doses per diem, one at each meal and at bedtime. This may be continued—forever. The only possible harm that may ensue is that the patient may feel the good effects of the elimination to such an extent that he unduly increases his intake of food. No other objection has arisen to veratrine in the writer's use of it, which has been prolonged and somewhat extensive.

After making a generous deduction from the above statements on the score of personal bias, it seems that veratrine may deserve a trial in this condition.

## PARALYSIS AGITANS.\*

BY JOHN V. SHOEMAKER, M.D., LL.D.,

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*Gentlemen*.—This patient, Mr. J. L., aged 46 years; nativity, Scotland; occupation, coal miner; complains of, on admission, general malaise and weakness, especially in his legs. He says he is nervous all the time, and that his sleep is very much disturbed by the nervousness and the constant muscular contractions of his legs.

*Family History*.—Parents are both dead. The mother died during childbirth, and the cause of the father's death he does not know. He has one sister and three brothers living and in good health, but has no knowledge of his grandparents and other kin.

*Previous Personal History*.—As a child he had measles, whooping-cough and quinsy on several occasions. Since then he has never been ill enough to compel him to remain in bed. He denies venereal diseases.

*Social History*.—He is married and is the father of six children. Wife and children are in good health. As a miner he is exposed to wet and draughts of cold air.

*Habits*.—For fifteen years he drank alcoholic beverages to excess; at times he would get on a spree and remain drunk for two weeks. However, for the past three years he has not indulged at all. He smokes tobacco excessively, and drinks a great deal of coffee.

*Present Illness*.—During the past year he noticed that he was gradually losing in strength. Six months ago he began to get very tired while at work, and often was obliged to sit down during the day. Sometimes when he did straining work and sat down to rest every muscle in his body would be in a state of tremor. Since the 15th of January, 1906, he has not been able to work owing to his general weakness, especially in the back and legs. He suffers no pain at all.

*Physical Signs*.—General examination shows a male five feet five inches tall, weighs 120 pounds, has gray hair, blue eyes, and apparently looks to be sixty-five years old. The skin over his body is moist and warm to the touch; over the knees and the sacrum are a few white, velvety, punched-out scars. The inguinal and axillary glands are enlarged and hard; the reflexes are normal, except that the patellar is slightly exaggerated in both limbs; the eyes respond to light and distance; the ears, nose and mouth are normal; the lungs apparently are in good condition; the heart is nor-

\* Delivered before the Medical Class of the Medico-Chirurgical Hospital of Philadelphia.

mal in size and beat, except that the sounds are slightly increased, and the abdominal viscera are all normal, but the area of liver dullness is slightly decreased in all directions. His muscles are soft and flabby in the back and legs; they are in constant motion or tremor. When he stands erect the muscles of his legs tremble so much that he shakes all over. When he sits down and has one leg crossed over the other, the tremor is more noticeable, the foot being in constant motion. He walks with his head bent forward, and the eyes fixed toward the ground a short distance ahead. His steps are short and hurried, and his arms are slightly flexed and pendulous, with the thumb and forefinger approximated, as in the act of making a pill. The disease has not advanced to the extent that his face and speech is affected. The characteristic "mask-like" expression is absent. There are also no mental changes except that he is brooding somewhat over his affliction.

*Diagnosis.* The diagnosis in this patient is easy, though the disease is not so far advanced; but from the gradual onset, the tremor of the muscles, the general weakness, and the character of his gait and attitude, we have diagnosed his trouble as one of paralysis agitans. It is called shaking palsy, or Parkinson's disease. This disease, especially in the stage this case is at present, might be mistaken for cerebro-spinal sclerosis, or multiple sclerosis. The chief differential points present in multiple sclerosis are no tremor when the patient is at rest, violent shaking of the head, tendon reflexes greatly increased; patient has no tendency to run forward; voluntary motion beyond control; the patient is peevish and childish, and there are periods of marked improvement.

*Pathology.*—The true pathology of paralysis agitans is not known, and remains to be a subject for speculation. Some think its pathological condition primarily begins as an endarteritis and periarteritis, followed by a proliferation of the neuroglia and patches of perivascular sclerosis. Others believe that it is first a functional disturbance, and later a destruction and degeneration of the dendrites of the anterior horn cells, thus interfering with the motor impulses. Many other suppositions have been made, but none are entirely satisfactory.

*Etiology.*—The disease is more common in men than in women. Alcoholism, exposure to cold and wet, mental work and mental exhaustion are supposed to be the causes of the disease. In this patient we have a history of alcoholism for fifteen years, and also exposure to wet and cold; the three facts combined are sufficient to lead us to believe that the alcoholism and the exposure were the cause of his trouble.

*Treatment.*—Most of the writers on this disease say that the medical treatment is absolutely without avail. Of course this is

true in some cases, but many patients can be helped materially, and live the rest of their lives without much discomfort. They usually die from some intercurrent disease. The drugs that have the best influence on the spinal cord in these cases are the preparations of *conium maculatum* and *cinicifuga racemosa*. We will, therefore, place this man on three minims each of the fluid-extractum *conii* and fluid-extractum *cinicifugæ* four times daily, increasing the dose one minim every other day until he takes twenty minims of each four times daily. The use of arsenic and strychnine are also of value in paralysis agitans by their effect upon the spinal cord. After this patient has had sufficient amount of *conium* and *cinicifuga*, I will place him on a prescription containing arsenic and strychnine. The galvanic and static currents of electricity are valuable to stimulate the spinal cord and give tone to the muscular system as well. Tepid baths and massage are also very essential to keep up the tone of the muscles.

NOTE.—Three weeks ago to-day I had the pleasure of showing you Mr. J. L., who is suffering from paralysis agitans. Since then he has been taking the *conium* and *cinicifuga*, and is now taking twenty minims of each of the fluid extracts four times a day. He has improved very much, as you can see for yourself. He has hardly any tremor of the muscles of the legs, and his gait is much more steady and more decided. He sleeps well, his appetite is good, and says he feels very much improved in general. While I realize that he is not cured, yet I feel that he is improved and will remain so, provided he takes good care of himself, and, in fact, I believe that he will still improve more as time goes on. I will discontinue the *conium* and *cinicifuga* to-day, and place him on a combination containing—

- R    Strychnine sulphatis . . . . . gr.  $\frac{3}{4}$   
       Liquoris acidi arsenosi . . . . . f $\frac{1}{2}$  ii.  
       Acidi hydrochlorici diluti . . . . . f $\frac{1}{2}$  ss.  
       Glyceriti pepsini . . . . . q.s. ad f $\frac{1}{2}$  iii.  
 M.    Sig.    One teaspoonful in water after each meal.

After he has taken this prescription I will increase the dose of arsenic; probably place him on the trioxide of arsenic.

# *Mental and Nervous Diseases*

IN CHARGE OF

N. H. BEEMER, M.D., AND CAMPBELL MEYERS, M.R.C.S., L.R.C.P. (LOND.)

## FUNCTIONAL INSANITY AND ITS RELATION TO ALLIED NEUROSES.

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It requires courage, if not daring, to advance at this stage of neurological research and knowledge—the view that many of the morbid mental conditions known as insanity are functional, and that therefore there are diseases of function as well as of organs. I expect this theory to meet with much adverse criticism—possibly with a severe rebuff. For these I am prepared, but to avoid misapprehension I request permission at the outset to define my terms—always a risky procedure, for it is said that by defining one erects an idol with special qualities and which invites by these qualities its own destruction. It is also said that the idol of to-day becomes the object of contempt to-morrow. Definition is, however, a convenience, for only by this means can we group allied symptoms, note their relations and sum up our knowledge.

By function we mean the work done by or the action of any organ or set of organs, and among these organs we include the "independent protoplasmic unit"—the neurone. The work of these neurones varies in quality and intensity. Their energy can vary with a suddenness which appears to preclude any organic change. We know, and it is proved both by experience and disease that the various organs of the body receive their direction, tone, and support through the neurones from the central nervous system, and although we are accustomed in disease to find structural alterations which account for the morbid phenomena, yet nature may, on occasions, experiment in so subtle, fine and obscure a manner as to alter the function without leaving any evidence of definite or appreciable change in structure. We meet with both men and women at all ages whose lives are a misery to themselves, a cause of distress to their relations and who suffer from perverted sensations or anesthsias, paresthsias, and dys-esthsias, from pains or algesias, from loss of

power or paresis, from various affections of the sense organs and even from mental abnormalities, yet who have no discoverable nervous lesions to account for these symptoms, and whose lowered vitality and consequent incapacity can only be described as "functional."

These functional diseases—also termed dynamic or vital as opposed to those of a physical or material character—are in contradistinction to organic or lesional diseases. We are acquainted, for instance, with tumultuous cardiac disturbances following upon a shock or surprise or associated with emotions of fear; with respiratory disturbances—familiarily described as "taking the breath away"—after startling sensations. We find albuminuria without disease of the kidneys, and mental perversion accompanying bodily disorders, without any definite structural brain disease. The mental irritability and the impulsiveness of cardiac (more especially of aortic) disease, the buoyancy and hopefulness evidenced in cases of tubercular phthisis and the different mental states accompanying digestive troubles or disorders of nutrition are so well known that the maxim "The stomach rules the world," is a true word spoken in jest. I need but refer to the mental states associated with gout and other metabolic changes to emphasize my theory that there are many and varied mental abnormalities without definite structural brain lesions, *i.e.*, that there are diseases of function as well as diseases of organs.

As to the definition of insanity, it is not in itself a disease, but a symptom which may be due to many different morbid conditions. It had been defined negatively as a condition opposed to sanity, and this is the view we shall adopt as being sufficiently comprehensive to include every variety. We know that the standard of mental health is a variable one, so much so, that one may safely say that nobody is always sane. The age of the individual, the period in which he lives and the class of society to which he belongs all have to be considered. There is a different standard of mental health, as possibly there is of honor and morality, and certainly of custom and social usage for each class of society and in each social *stratum*, and therefore so many different degrees of insanity; so that insanity becomes a want of conformity with an artificial code. We know, however, that the social regenerator, the man of genius, the statesman and the poet, are all out of harmony with their surroundings, yet the term insanity can hardly be taken to describe their mental life. Moreover, the criminal, the pessimist, nay, even the ambitious man, may each be out of harmony with his environment, but yet not insane. Of all the symptoms of insanity, possibly the presence of illusions and hallucinations, which delusions corroborate,

are the chief indications, because these form the basis of acts and it is *conduct* in the last resort which is the key-stone upon which a judgment rests, as to what constitutes sanity or insanity. It may be pointed out, however, that there are probably many hundreds of men and women who suffer from no legal disability or social ban because of the presence of illusions, hallucinations, or delusions. They fulfill all their obligations to themselves and to society and their idiosyncrasies are tolerated. When, however, abnormal conduct passes a limit fixed for that particular class of society, considerations of expediency decide that the person should be segregated; he is then certified and henceforth becomes an official lunatic and his insanity a recognized aberration. I venture to think that many of these cases in their early stages are functional. It is well known to those with large experience of mental diseases that all the symptoms of insanity may be present in disordered conditions of health, and cases are received into asylums which are not true organic insanity, but the delirium of febrile diseases, where illusions, hallucinations and delusions were temporary and due only to disordered nutrition. I have seen cases of scarlet fever, typhoid, and pneumonia, in whom the mental symptoms so preponderated that the patients were certified and admitted into an asylum as alleged lunatics, in whom the illusions, hallucinations, or delusions were only the temporary delirium or febrile states resulting from disordered nutrition. Furthermore, in regard to the question of insanity, the symptoms may be repressed at the instance of the individual patient, who is able to inhibit the undue prominence of delusions or of any one striking content of consciousness, which again indicates that there is an absence of structural or organic lesions. It will be seen that we not only deal with legal insanity—which is a formal and artificial aspect—but that the term insanity is to us more comprehensive and is taken to include all mental conditions which are opposed to sanity. What has the pathologist to say to us about insanity? If we accept definite lesions accompanying parietic and other forms of dementia, certain neuronic and other changes in acute delirium, and the deficiency of brain development in idiocy and imbecility, there is no pathology of insanity. There are innumerable mental states for which there are no definitely discovered or ascertained physical conditions, and there are many mental abnormalities in which both microscopical examination and the comparison of appearances observed after death with the symptoms recorded during life, fail to discover any morbid states in the brain underlying the mental derangement. In many cases of insanity the most delicate electrical apparatus, the test tube, the ophthalmoscope, the sphygmometer, and the microscope in the hands of able, earnest, and com-



petent observers and investigators have all failed to recognize any disease in the physical substratum of mind, and observers have been content, in the absence of definite lesions, to describe mental abnormalities as "disease manifestations"—but not disease, *i.e.*, the mental states or conditions are functional and not due to structural or organic changes. It is open to objection that the absence of observable lesions is not definitive, that failure to observe them is due to insufficiency of the means of investigation at our command and that the further investigations are directed the fewer become the number of functional diseases. It is accepted, however, that up to the present many nervous disorders have attributed to them as facts of causation conditions such as are implied in the terms "defective or disordered cerebral innervation," phrases which although somewhat vague may yet probably harmonize with the facts better than any others hitherto advanced. Ferrier, Horsley, Waller, Sherrington, and other great physiological workers have thrown much light upon the energy set free in nervous centers. Horsley has detailed methods of estimating the amount of energy developed in the nervous centers themselves, by quantitative measurements of phenomena correlative to nerve energy, and Mosso has endeavored to draw conclusions in regard to nerve energy by measuring the physical effects directly produced by its activity. In spite of these researches, however, we know little more than the rate of transmission or the rate of progress of nervous energy along a nerve. What the actual energy may be is still vaguely described as "motion liberated by molecular change," *i.e.*, by chemical or electrical changes in the highly specialized nervous structures, a position scarcely advanced beyond the description of Newton, that nervous energy was "a vibratory disturbance of the particles of the nervous system." Possibly all actions of nerve elements in the brain are a chemical change, the molecules breaking up into lower compounds. We know little about nerve force, but we do know, by their sensitive reaction to toxic agents, that the higher nerve structures are exceedingly delicate, that they are readily excited and readily inhibited, showing a condition of sensitive equilibrium, which is demonstrated by the disturbances of muscular action so characteristically associated with the mental erethism of acute insanity. Let us briefly consider the physiology of these nerve structures. When that part of the cortex anterior to the fissure of Rolando is electrically stimulated, co-ordinated and not individual muscular contraction results—the contractions being with the object of accomplishing some definite movement. An irritative cortical lesion here will cause clonic convulsions, and if circumscribed then convulsions occur in definite groups of muscles, as is observed in Jacksonian epilepsy. A destructive lesion in the

same area of the brain will cause paralysis of the same group of muscles, but the paralysis is of the spastic type, which shows that the contractility of the muscles maintained by the lower motor neurones in the cord is exalted, either by removing the restraining influence of the cortical set, or by irritating the lower through the degeneration of this higher group. With regard to tactile sensation, the researches of Sherrington, Campbell, Bolton, and others show that these afferent sensations arrive in the cortex of the parietal lobe by way of the optic thalamus—which probably modifies impulses from the periphery—and are closely related to the efferent motor discharges. Tactile sensation is the most general and universal source of knowledge of the environment in the vertebrata, and it is this region, possibly the “kinesthetic area,” which is affected in sensori-motor disturbances and gives the individual his personality. As to the neurone, its body not improbably exercises a trophic influence over the neuraxon, which also in turn exercises some temporary influence upon the cell body, whereas the protoplasmic dendrites, by their arborizations with axis cylinder collaterals and by their extensive branchings over minute blood-vessels are both centripetal organs for collecting nervous impulses, and nutritive channels for the supply of food material. We know the effect of most poisons to be upon the nutritive substance of these neurones, and, with the possible exception of the tetanus toxin, not to be upon the nerve fibres or stereoplasm of these cells. We know little of the cortical areas other than those which are sensory and motor, or both, and which are described as “kinesthetic,” and possibly two-thirds of the human cortex is concerned neither with motion nor sensation, and it is this portion of it which differentiates man from other vertebrates. This remaining portion has been described by Flechsig as the great association area. It is said to be concerned with judgment, comparison, believing, and originating actions, and to be functionally the highest area, involving the most complex intellectual processes. This region, physiologically, is therefore the most highly developed, the least organized, and the most complex of all the cortical areas and in consequence the most likely to be disturbed by adverse stress. In considering functional mental diseases one cannot but be struck with the different reaction to stress of individuals in different families. We know of some families with suicidal impulses, in which mental depression caused the suicide of grandfather, father, and son, each in his turn at corresponding ages. Of all forms of mental affection, that associated with suicide is the most often inherited, and of 1708 males under my care, suicidal tendencies occurred in 27 per cent. In 200 of these latter, a direct history of ancestral insanity was noted in 43 per cent., and a collateral one in 27 per cent. We

meet with an epileptic parent with more than one insane child. I have had under my care in an asylum, a father and at different times five of his children, and it is quite common to meet with father and son or sons suffering from insanity and frequently in the same asylum. Also, insanity appears to have hereditary equivalents; for epilepsy, hysteria, hypochondriasis, chorea, alcoholism, and crime, may appear interchangeably in the descendants of insane persons. Even genius, which is a departure from the normal type, is not infrequently met with among relations from an insane stock. Not a few among the patients in city asylums, or among their relatives, are inventors and patentees. In no department of medicine is the question of family inheritance more marked than in the practice of nervous diseases, and it is not ideas or diseases themselves that are transmitted as we see by the interchangeable equivalents already referred to, but a "tendency" or a natural proclivity to nutritional disturbances and manifested mainly at one or other of the important and critical periods of life when a strain or a stress ordinary and habitual to the stable person and easily borne by him, may in those with family history of insanity cause a mental breakdown. Man is an agglomeration of organs, and the healthy life of man is the harmonious co-operation of all these dissected elements, each of which in health contributes to the total well-being, each also being capable of resisting disintegration through adverse circumstances, according to its own special stability. This tendency is familiar in the practice of all hospital physicians who observe the liability to nutritional disturbances in other organs, such as the liver or kidney, or in groups of organs such as these with cardiovascular affections, and also by the appearance of malignant disease passed on, so to speak, from parent to offspring.

Now mental reaction greatly depends upon the character of the afferent stimuli brought to the cortex from the various sense organs, and it is interesting to note that the sense of smell (the least informing to man in regard to the external world) is phylogenetically the oldest, being most highly developed in the lower vertebrata; some fishes, for instance, having as Dr. G. F. Watson has shown, relatively the greatest central representation for it. This sense is therefore the most organized and it is rare for the sense of smell, or even taste, which also gives little knowledge of the external world, to be affected in insanity. The two senses which supply man with means of communication by speech, writing, and reading are sight and hearing; together they are pre-eminently intellectual, they are exact and analytic and are on a higher plane in man than are any of his other senses, but they are the most frequent to be disturbed in cases of highly evolved insanity. Touch, the most general of the senses, is less intellectual

than either sight or hearing, but it is the one most commonly disturbed in that "lower level" form of insanity associated with hysteria, and to which we shall again refer. As to the senses, illusions form a common psychic phenomenon in insanity and it is doubtful—unless they are unilateral—if mental illusions are ever peripheral. Both illusions and hallucinations may be physiological, that is, they may be temporary in their duration or they may come and go. We meet with cases of insanity in whom these perversions are not constant; there are periods during which those who suffer from them are suddenly quite free and remain so for indefinite intervals, a condition which suggests that the fundamental process is nutritional and functional; possibly the fine dendritic processes of the neurones are temporarily disturbed, as they are known to be in cases of injury, when mental unsoundness is characterized by loss of memory of the accident, but which ends in complete recovery. It is a short step from illusions and hallucinations to delusions, which are ideas conceived upon false sensory impressions or perceptions. We are familiar with deceptive impressions produced by diplopia, scotomata, photopsia, disease of the peripheral nerves, and exotic sounds of various character, all of which may be due to nutritional disturbances and none of which can be considered to be insanity. Delusive ideas, like hysteria with contractures, may in time be accompanied by organic changes, but in their early stages they are more often functional, for other associations may grow and eject them. It is the consequence of delusions rather than their cause which makes them pathological and it is their projection outwards which eventually causes them to be regarded as insane delusions. So long as we are dealing with the external world, our facts of causation are simple and apparent, but when we pass to ideas—questions relating to "self"—we are face to face with "consciousness" and we are unable to analyze either the consciousness of others or what have been described as our own "unconscious physiological processes," conditions often referred to in hysteria. We can only state that the cause thereof appears to be psychical phenomena. We do not know even what the various elements of mind may be, but we can relate the different ways in which consciousness may refer to an object, viz., as being pleased with it, desiring it, and remembering it. We do know, however, that the various elements implied in cognition and feeling, when displayed in correct association and under proper control do give us healthy mental reaction; when these are impaired or their combination is affected, then the prominence given to any one factor possibly implicates all the others, and illusions, hallucinations, or delusions result. The delusions met with in insanity—whether functional or organic—are as various as the manifestations of human

thought, and we can only say in regard to them that some stimulus probably excites a group of cortical neurones, and a kind of "intercellular tetanus" gives rise to a play of ideas, which, when the excitations are transferred to motor fibres, are associated with action. In health the steady current of nerve force flows evenly from center to center and there is equilibrium between the various groups of cortical neurones, the stream of nerve force also flows down the pyramidal tracts and controls the spinal centers, keeping the muscles in a state of healthy tone. All the neurones are probably in a high state of chemical tension and any nutritional disturbance means explosion followed by exhaustion, a condition which we possibly find in all functional diseases.

What is the characteristic feature of functional diseases and what are the forms of mental abnormalities which come under this description? Speaking generally, we are correct in stating that functional diseases are characterized by their lesser duration, their slight and transitory character and their recovery, and this is the standpoint from which we urge the consideration of the subject under discussion.

It is not improbable that hysteria is at the root of most of the mental conditions in women that come under the observation of the asylum physician. It is as definitely related to mania in women as hypochondriasis is to melancholia in men, and both are conditions pre-eminently functional in their pathology. Hysteria may be looked upon as a temporary sensori-motor disturbance with a psychosis, and the sensory disturbances of hysteria indicate that there is a participation of centers lower than those connected with mental symptoms. Hysteria is a "lower level" form of insanity, which to some extent is under the control of the higher centers; whereas insanity is an affection of the highest levels, and therefore a disturbance of the highest intellectual processes themselves. In hysteria the tendency was for action to follow upon afferent or sensory impressions, whereas in case of insanity, action followed delusions. Sensory disturbances effected results in hysteria similar to "fixed ideas" in variety and as in hysteria, one cause or a summation of causes may bring on various effects, so in insanity one overwhelming psychosis or a series of small worries and anxieties may cause the mental symptoms.

The greater number of women admitted into asylums during the adolescent period of life suffer from insanity of a transitory type, as is evidenced by the fact that of the women admitted under the age of 25 years into the London asylums during 1903, 55 per cent. were discharged recovered, whereas the recovery rate based upon all ages was only 34 per cent. This type of insanity is often dependent upon anomalies of health, such as anemia, amenorrhea, simple exhaustion, the strain of modern

life, and disturbances of the emotions, and it passes off with improvement in the general health, and nearly 50 per cent. of all the women who were discharged recovered left the asylums of London under six months' residence. There is no definite hysterical psychosis, although most of these cases are exceedingly unstable and sudden in their mental reactions, which is shown by their capriciousness, irritability, and sentimentality; being at one moment joyous, at another sad and tearful, but without obvious reasons for the change. In the intervals between hysterical attacks they are bright, intelligent, and cheerful. These cases are always exceedingly responsive to suggestion, and the various forms of paralysis they suffer from are either assumed by suggestibility, or they recover by suggesting or diversion, the moral treatment frequently referred to as asylum treatment and implying a change of function. There is often a loss of memory which renders hysterical patients self-contradictory, but the amnesia is not limited to ideas, there is amnesia of the "kinesthetic" elements as well. There is no recollection of the movements of a limb, showing that the sense of muscular impressions—probably registered in the Rolandic area—is functionally in abeyance, the various movements with their images fail to be preserved and reproduced owing to the functional disturbances giving rise to a condition called "kinesthetic anesthesia." Amnesia in these cases may be so marked that all past events in their life may be completely deleted, their memory only returning with or after another paroxysm. Such cases are rare, but a classical description is given of sudden transformations by Dr. Albert Wilson in his record of a case of "double consciousness," or dual personality. These occurrences quite justify the definition of hysteria as a "disintegration" of the personality. The weakening of will power is a distinct feature in these cases, many women being quite unable to carry on their ordinary avocations and having no power even to answer questions. The prominence of the sensori-motor disturbances gives rise to vociferous singing, laughing, and dancing, or the patients in their excitement break windows, tear clothing, shout, scream, and behave extravagantly, which indeed most frequently results in their being brought under treatment. These seizures, followed by lethargy, together with the mental state, have caused such cases to be mistaken for epilepsy, and I have received cases in which the seizures and symptoms were described as due to this cause, but which were really cases of hysteria. I have also received cases in which these statements were made in the medical certificate, but the fact of coming under treatment and being brought to the asylums has acted as a shock of surprise and no further demonstrations of excitement have taken place. The suddenness of these states and

their variability harmonize with the suggestion that these are nutritional disorders and not organic lesions. Of all the physical symptoms of hysteria, anesthesia or disturbances of sensation are the most constant, and cases are familiar to most hospital physicians of patients who were completely helpless upon admission, yet who could move their legs in bed or push their feet against an object, but could not stand or walk, yet with the stimulus of a strong emotion or a new suggestion they have walked easily, possibly after weeks or months of bedridden helplessness. The anesthesia in hysterical cases is somewhat pathognomonic. It may be in islets of skin not corresponding to any peripheral nerve distribution or that of blood-vessels, neither does it conform to any spinal distribution and it is not segmental or embryonic in character. It is total and complete, and corresponds with a cortical area having associated or systematized functions. Hysterical patients are not conscious of their loss of sensation, the loss does not come into their personality and there is in consequence a "shrinkage" of consciousness. Such is not the case in the anesthesia of gross lesions, which further suggests cortical affections. The cortex, moreover, besides sensation, controls the emotions, the heart's action, respiration, speech, and voluntary movement. All these may be, and often are, affected in hysteria.

In the condition described as *astasia*, there is no definite paralysis, but the patient is unable to stand, and in *abasia* he falls when attempting to walk, although he can skip over a rope or walk on tip-toe. Moreover, in conditions such as "writer's cramp," and in the various and numerous other occupation neuroses, there is paralysis of different forms, but at the same time there is complete control over the hand, which can accomplish any movement other than that which caused the paralysis. Such clinical facts as these distinguished between disturbances of function and disease of the organ—a theory which is thus capable of explaining the phenomena. The mental symptoms of hysteria are vividly portrayed in mental epidemics, such as are initiated by the so-called "Revivalism," as also in cases of "possession" or "demonomania," cases of witchcraft and "cures" at holy shrines.

Another functional condition which merges into insanity is hypochondriasis. It is as closely related to sensation as hysteria is to the emotions. There is a feeling of profound illness and a tendency to exaggerate and brood over the feelings, which give rise to morbidly conscious states. The whole of the person's attention is concentrated upon his sensations, but there is nothing abnormal to be discovered at the periphery, and the functions complained of appear to be physiologically healthy. If in hysteria there is a cortical absence of certain sensations—which may determine anesthesia and paralysis, in hypochondriasis there may

be cortical hyperesthesia of sensory areas. Whether these conditions are due to exhaustion, or to some influence which modifies exhaustion, and which brings these sensations into undue prominence is not easy to ascertain. If, however, hypochondriasis be of long duration, the mental state associated with it tends to become fixed, which supports the view that long-continued functional disorder tends to become organic, as we see when hysterical contractures are accompanied with sclerosis of the corresponding pyramidal tract. It has been experimentally proved that peripheral electrical stimulation continued for long periods may give rise to structural changes in the brain. There are many borderland cases whose depression may be diverted by functional treatment; cases which a change of occupation relieves and which thus recover.

A condition often met with in highly-wrought, able, and over-worked men and women and now described by the term neurasthenia, is somewhat allied to hysteria. There is hyper-sensitiveness in both, but there are no sensory disturbances in neurasthenia, no motor paralysis, no fits and no contractures, although neurasthenia may occur in hysterical subjects. There is simply fatigue and increased excitability with muscular weakness, and it is a symptom-complex rather than an entity. There is the same difficulty in fixing the attention and the same deficiencies of memory as in hysteria. The condition is probably the result of long-continued mal-nutrition and ill-health, and is favored by civilization and city life, by heredity and by various excesses. Of the exciting causes, possibly, influenza, is as potent a factor as any, especially when acting upon an already exhausted constitution. I have seen many such cases outside the asylum, not seldom among the "prize winners" in life; and although nature is generally uniform in her lesions, this functional state being of long duration, is known to end in confirmed organic brain changes and chronic insanity, demonstrating its analogy to the contractures accompanied by organic lesions in cases of protracted functional hysteria. A state of mind bordering upon insanity is that of mental depression without delusions, the condition described as "*folie raisonnée déliré*." There is no other functional disturbance and the sufferer is for a varying period in this state of unrest when suddenly equilibrium is established and the phase passes off.

Another functional condition which is responsible for at least 8 per cent. of all cases of certified insanity is epilepsy. The abnormal mental states associated with epilepsy are unlike ordinary insanity, for those who suffer from it are more altruistic and they are less under the sway of delusions, but suffer more frequently from sensory disturbances. The mental states of



epilepsy seem to be halfway between those of hysteria and true insanity, the sensori-motor disturbances are present and so also are those of consciousness, which latter during the fit is completely in abeyance, yet it must be owned that there are no definite lesions in cases of idiopathic epilepsy. Of all mental states in relation to the fit, that of post-epileptic automatism is the most inexplicable. After an epileptic fit a person will occasionally lose all memory of past ideas, he will wander about, take a new name, forget wife, family, and domestic attachments, assume a fresh occupation and oblivions of the past start upon a new life and remain in this fresh environment for an indefinite period, or until another fit brings back his recollection and he returns home after a complete functional "topsy-turveydom." Some such occurrences in less striking forms are frequent, and are closely related to hysteria, but as they suddenly change, they remain unexplained by any organic or structural theory. I have recently had under my care three men certified as insane after a "fit" of some kind which completely erased from the memory events in their previous life and leaving them with a new personality.

In ordinary daily life we often find after fatigue that there is considerable difficulty in fixing the attention, we have a weakened grasp of our subject and cannot recollect a lost word—there is difficulty in expressing our ideas in words. Long after we need it, the missing word appears—possibly in association with some remote expression, and we are unable to explain the phenomenon except upon the theory of disordered neuronic function. It has been pointed out by Gowers that the most common effects of over-use of the brain are sensory, and evidenced by some disturbances in the feelings which, as he states, are appalling in their variety and degree. This view, in my opinion, coincides with the evolution of insane ideas which are based upon sensory anomalies; but what it is that causes these functional disturbances is not so clear. Hodge describes a swelling but not a destruction of the cellular protoplasm in conditions of fatigue. Possibly some products of nervous overaction fail to be eliminated, and either poison the store material of the nerve cell or interfere with some obscure electrical or radio-active action at the synapses. As Gowers further states, we cannot estimate the cumulative effect to which a minute original variation in the nutritive material of a nerve cell may give rise, but we have experience, and are aware, that function can alter structure. In regard to some of the allied neuroses, cases of "convulsive tic" seem to me closely related to cases of delusional insanity and impulsive obsessions, those of neuralgia and migraine, of tetany and cramp, also closely resemble in their suddenness and intensity those of various forms of epilepsy. I have seen tetany associated with mental

depression, following exhaustive diarrhea, and both have cleared up with improvement in the general health. These neuroses with chorea, and para-myoclonus multiplex seem to me to be heirlooms of psychopathic and neuropathic families, and so far as it is at present known are without definite structural pathology. I have at present under my care a case of para-myoclonus with mental symptoms, who is one of three members of the same family similarly affected. The mental state of patients suffering from what is styled "dementia precox," in my opinion seems to be closely allied to functional states, some of which appear to be physiological. The mental pre-occupation of ordinary normal health, for instance, bears much resemblance to the abstraction of these demented youths, and it may not be unreasonable to look upon the latter as functional states, for a few of these persons recover quickly, the symptoms are of short duration and vary from slight moody self-absorption to complete lethargy and stupor. Moreover, the mental symptoms probably occupy the same nervous regions, they are provoked by the same causes and are executed by the same mechanism, whether the condition be functional or organic. It is unlikely, however, that long-continued stupor can exist without organic change in the pyramidal cells of the cortical area, as functional activity stimulates nutrition and is beneficial; whereas, its suspended activity means a decreased blood supply and therefore a slower removal of used-up products and less nutritive plasma.

The normal physiological condition of pregnancy is another process with mental symptoms. It is a function which involves the reproductive organs and affects the whole organism. The function of reproduction covers most of the elementary excitations of which man is capable, and is one of the most imperative and fundamental of the activities in nature. It is accepted that gestation is attended with a great deal of nervous disturbance in all women, the intimate sympathetic connection of the mammae with the gravid uterus giving rise, even in normal persons, to various forms of neuralgia, headaches, dizziness, and insomnia, which may be so extreme that irritability, fractionsness and despondency of a serious character ensue, yet these conditions completely pass off in the majority of cases when the fulfilment of this process is complete.

I purposely avoid any reference to the many toxic insanities, although the confusional delirium and the acute hallucinatory states accompanying alcoholic intoxication, pernicious anemia, puerperal toxemia, cocaine, morphine, pellagra, and other poisons closely simulate those of febrile diseases and coma. Possibly that condition described as dipsomania, the longing or craving for stimulant is a functional state. It is like other similar states

without any organic pathology and like them also one that occurs in persons with a tainted family history—psychopathic or neuropathic.

I do not think I need go further than to draw two conclusions from the imperfect consideration of this long list of functional mental and nervous diseases. Firstly, the necessity for maintaining a sound heredity. Secondly, to urge that all cases presenting mental symptoms should be brought under treatment as soon as possible, for minute variations in the nutritive plasma may effect serious results upon and cause distressing disturbance is the essential element of nervous tissue, as functional mental diseases of long standing in an organ such as the brain—which is the slowest to reach maturity—may cause organic and incurable insanity.

D. C. M.

## *Selections, Abstracts, Etc.*

### FURTHER OBSERVATIONS ON THE TREATMENT OF SUMMER COMPLAINT.

BY C. C. CRONKHITE, M.D., MARION, IND.

LAST year I reported some notes on an epidemic of dysentery which prevailed several years ago in Marion. Among the twenty-three cases recorded only two terminated fatally, and I believe that even these would have recovered with careful nursing. Owing to the severity of this epidemic the results obtained were unusually favorable, and are attributable in great part to the treatment adopted. In these cases it is very important to control the exhausting mucous and bloody discharges from the bowel, and for this purpose it is necessary to select an astringent which will exert an effect on that portion of the intestinal tract which is affected by the disease. The majority of astringents are unsuitable for this purpose, owing to the fact that they are absorbed or rendered inert in the upper portion of the intestine, so that the amount that finds its way into the lower portion is insufficient to produce any curative action. Moreover, it is very important in these cases not to administer remedies which may disturb the digestion, and this is very likely to happen with the astringents in common use. The attempt has been made in a number of the new astringent preparations introduced in recent years to overcome this objectionable feature. Of these, I employed tannigen with great success in the above epidemic. Its administration was unattended with the least gastric irritation, this being attributable to the fact that the drug is insoluble in the gastric juice. In the intestinal canal, however, the drug gradually yields up its tannic acid constituent, owing to the action of the alkaline fluids, and this liberation of tannic acid is particularly marked at the points where the secretion is most abundant; that is to say, at the site of the disease.

Since reporting my observations with tannigen I have had an opportunity of making a further study of its properties during last summer, and would cite a number of cases from among those treated, in order to throw further light upon its mode of action.

CASE 1.—Babe, fourteen months old; frequent, large, watery and offensive stools, which condition had existed for thirty-six

hours. I gave tannigen in three-grain doses every hour until four doses were taken; then at intervals of four hours; also teaspoonful doses of elixir of pepsin with food, and ordered rectal douches night and morning. Recovery after one week.

CASE 2.—Mrs. S., twenty-five years of age; vomiting and purging for four days, for which she had been taking home remedies. I prescribed a brisk cathartic, and followed with ten-grain doses of tannigen every two hours, until the actions of the bowels were checked, and then gave it every four to six and eight hours as needed. Recovery after three days.

CASE 3.—Babe, four months old, had been under the care of a doctor for a week. Frequent, watery and musty stools, green and full of undigested milk. Nursing at the breast discontinued for twelve hours; sub-chloride of mercury was given in minute doses hourly for six hours, followed by tannigen, two-grain doses, every two hours, until the movements were checked, then every four hours. Disappearance of the diarrhea after seven days.

CASE 4.—Girl, two years of age, had suffered for twenty-four hours. Vomiting and purging from eating a large quantity of green corn. I again gave calomel, followed by ten-grain doses of tannigen. The vomiting ceased after three hours, and the diarrhea after forty-four hours.

CASE 5.—Babe, two months old, had been allowed green apples, which caused diarrhea. Yellowish green, mucous and fetid stools hourly. I ordered the rectal douche night and morning, and tannigen three grains every two hours, and later four to six hours. The father reported on the following morning that the child was greatly improved. Recovery in four days.

CASE 6.—Girl, twelve months old; diarrhea of two days' duration; ten to twelve whitish-yellow, offensive and copious stools in twenty-four hours. Treatment commenced by triturates of calomel every hour till the evacuated matter assumed a more normal consistency and color; then tannigen, in three-grain doses, every three hours until its effect was produced, and then every four hours. Recovery complete in ten days.

CASE 7.—Girl, six months old, bottle-fed. Diarrhea for four days; copious green, watery and offensive stools, occurring every one or two hours, during the day and night. Loss of appetite and sleeplessness, and great thirst and vomiting. All food was stopped for twelve hours, and the bowels moved thoroughly with calomel; this was followed by my usual remedy—tannigen. In this case I was compelled to prescribe a small amount of opiates to relieve the pain, but all the time continued the use of tannigen. This child has not fully recovered, and is in a precarious condition.

CASE 8.—G., forty years of age, ate an unusually hearty sup-

per, and awoke the next morning with severe vomiting and a diarrhea that kept him "on the jump all the time." I gave him 15-grain doses of tannigen every hour until the action of the bowels was checked, then at intervals of four or five hours. I also used in this case half-grain tablets of opium and camphor to relieve pain. Patient out in two days.

CASE 9.—Mr. H., thirty-nine years of age, teamster; was seen by me at 9 a.m. The bowels had moved ten times during the previous night. Intense thirst and nausea and severe abdominal pain were present. This case was treated similarly to the above. Recovery occurred in two days.

These are a few of the many cases of diarrhea treated during the past year with tannigen. The reader will observe that I gave the drug alone, and I have obtained better results by so doing. I have tried the various formulas with tannigen, but was not pleased with the results.

Tannigen is almost devoid of taste and children take it readily. Its action is quick, powerful and effective. When called to a case at the commencement of diarrhea no preliminary treatment is needed, but I begin at once with tannigen, giving small, oft-repeated doses, rather than large ones. Where cases have received "home treatment" for several days, a calomel purge is an excellent preliminary step, and this is to be followed with tannigen. To the doctor who has been in the habit of treating diarrhea with castor oil and other nauseous drugs, tannigen presents the advantages of being well tolerated by the child, and thus pleasing the parents. I have not had a death so far this year from summer complaint. It is of the utmost importance to restrict the diet and prevent the child from receiving too much fluids. There is a desire on the part of the parents to do this, and they must be closely watched by the doctor.—*Atlanta Journal-Record of Medicine*.

## ON SOME EXTRACTS FROM THE DIARIES OF BISHOP NICOLSON.

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IN an editorial article in this journal towards the end of 1903, reference is made to the medical knowledge of the Middle Ages to be found among religious manuscripts hidden away in monasteries or other repositories of learning in Europe. At a later period much interesting information of a medical character is to be found in the diaries of famous ecclesiastics. Portions of the diaries of a famous English bishop of the eighteenth century have lately been published in the *Transactions of the Cumberland and Westmoreland Antiquarian and Archaeological Association* under the able and sympathetic supervision of the Bishop of Barrow-in-Furness, into whose hands the valuable manuscript diaries have fortunately fallen. With his consent I have had a careful examination of the diaries made, and all entries of medical interest carefully copied. It is my intention to make a few commentaries on such of these entries as seem suitable for publication in a medical journal, but before doing so a few particulars of the life and character of the author of the diaries will help to make this paper more intelligible.

Bishop Nicolson was a notable man in his day. His father was the rector of a country parish in Cumberland, and on June 3, 1655, the author of the diaries was born. He was educated at first at a country school, and matriculated at Queen's College, Oxford, in 1670. In 1678 he spent some time at Leipsic, at the expense of Sir Joseph Williamson to learn German, in which language many entries in his earlier diaries are written, especially those which he did not wish to be easily read by persons around him. In 1679 he was elected Fellow of his college and ordained deacon. In 1681 he was collated by Bishop Rainbow to the first prebend in Carlisle Cathedral, and in 1682 he was appointed to the Archdeaconry of Carlisle. He was consecrated bishop of Carlisle in 1702, was translated to the Bishopric of Derry in 1718, and to the Archbishopric of Cashel in 1726-7, but died on February 14 of that year before taking possession of his new see.

The diaries give the impression of a man of great bodily and mental activity, keenly interested in history, archaeology and botany. There are many entries relating to medical matters, and some of them have been published in the transactions above re-

ferred to, but others have not yet appeared in print. The first entry to which I wish to call attention refers to

#### TOUCHING FOR THE KING'S EVIL.

1684.—July 14. In ye morning King's musick at the bed-chamber, as usuall on Mundayes. Touching for ye evill in ye Guard Chamber. Dr. Montagu held the gold. Water brought to ye King by ye Vice-Chamberlain.

1708-9.—March 28. Visitted by Mrs. Roose who wants the Queen's touch for her daughter.

This practice of touching for the evil boasts a very respectable antiquity. Most writers seem agreed that the first monarch who possessed the gift of healing was Edward the Confessor, who reigned from 1042 to 1066, but only one instance is recorded of his using it, and that by a historian (William of Malmesbury) who wrote his history about eighty years after the king's death. Dean Stanley, in his *Historical Memorials of Westminster Abbey* (2nd ed., p. 13), says in referring to the Confessor, "there was a kind of magical charm in his thin white hands and his long transparent fingers which not unnaturally led to the belief that there resided in them a healing power of stroking away the diseases of his subjects." The account which Shakespeare gives of the healing touch by this monarch will be found in *Macbeth*, Act IV, Scene 3, but it is obviously based on knowledge of what was the practice in his own day, as he speaks of the king using prayers and giving gold, which was probably not in circulation before the time of Edward III. Malcolm (a fugitive from his own kingdom after the murder of his father, and residing at the Court of Edward the Confessor) describes the healing in these words:

MALCOLM. 'Tis called the Evil :  
A most miraculous work in this good King ;  
Which often, since my here-remain in England,  
I've seen him do. How he solicits heaven,  
Himself best knows : but strangely-visited people,  
All swoln and ulcerous, pitiful to the eye,  
The mere despair of surgery, he cures ;  
Hanging a golden stamp about their necks,  
Put on with holy prayers : and 'tis spoken,  
To the succeeding royalty he leaves  
The heavenly benediction.

There is no record of any healing touch having been practised by any of the four kings of the House of Normandy. William the Conqueror was probably too much occupied, as one historian remarks, with killing those who were well, and "the uproarious sons of the Conqueror affected no share in the sacred mesmerism



of their saintly predecessor. They manipulated the sword, the lance, and wine cup, occasionally knocked healthy people on the head, but carefully eschewed the company of the sick." (Miss Strickland's *Queens of England*, vol. xi, p. 105.)

Henry II, the first of the Plantagenet kings, emulated the Conqueror, but it is recorded that Edward I. healed one hundred and eighty-two persons by the touch. The practice was continued by all succeeding monarchs down to the time of Queen Anne, who was the last English sovereign to touch, and during her reign the royal healing service was first added to the Book of Common Prayer, just after the thanksgiving for her accession.

Among the latest, if not the last, for whom the royal touch was used, may be mentioned the celebrated Dr. Johnson, and in Boswell's life of this distinguished lexicographer (London, 1824) vol. 1, pp. 17, 18), there is a full account of the case. In some reigns enormous numbers were brought to receive the supposed benefit of the royal touch. In the reign of Charles II. the register kept of such cases shows that the number touched amounted to 90,798. The greatest number touched in one year was in 1682, when 8,447 were registered. This is only two years before the date when the writer of the diaries saw the process which he describes. Physicians, surgeons, and ecclesiastics all had great faith in this cure. Gilbertus Anglicus, a physician of the time of Henry III and Edward I, says scrofula is called King's Evil because the kings have power to cure it. John of Gadsden, physician to Edward II, advises recourse to the royal touch in desperate cases. Dean Tooker, one of Queen Elizabeth's chaplains, testifies that many wretched sufferers were restored to health by the queen's touch, aided by the prayers of the whole church. Clowes, surgeon of St. Bartholomew's and Christ's Hospitals, in writing of scrofulous ulcers, says:

"These kinds do rather presage a divine and holy curation which is most admirable to the world, that I have seen and known performed and done by the sacred and blessed hands of the Queen's most Royal Majesty."

On the accession of William III the healings ceased for a time, the king being persuaded that the sick would not suffer by the omission. On one solitary occasion he was importuned into laying his hand upon a patient, and he said, "God give you better health and more sense." Each person touched received a gold coin from the royal hands during the ceremony.

The touch pieces, or "healing medals," one of which was given to each person, were at first made of gold, and the coin was called an angel noble because it had the figure of an angel on the reverse side. In the reign of Henry VII the angel noble was the smallest

gold coin in circulation, and it was in this reign that a ritual religious service was first instituted. The office of Prayers at the Healing is to be found in many of the older prayer books, and as late as the reign of George II, in a Latin prayer book, published in 1744, there appears the *Forma Strumosos Attractandi*.

The kings of France also claimed the right to dispense the gift of healing. Laurentius, first physician to Henry IV, was indignant at the attempt to derive its origin from Edward the Confessor, and asserted that the power commenced with Clovis I, the first Christian king. It is recorded that Louis XVI on his coronation in 1775 touched 2,400 individuals. He touched each one by making a cross on the face and saying, '*le roi te touche, Dieu te guérisse*.'

#### DR. CARDANO AND THE ARCHBISHOP OF ST. ANDREWS.

1685.—March 30. Dr. Jennison's cure for ye growing in of ye Liver, practiz'd by Cardang upon ye A. B. of St. Andrews. Pouring cold water suddainly on Him, after warm'd with oils.

Cardan, or, in the Italian form of the name, Cardano, was famous as an astrologer, mathematician, and physician. He was born at Pavia in 1501, and in 1551 one of the most interesting episodes of his life occurred. He was summoned to Scotland as the medical adviser of Archbishop Hamilton of St. Andrews. The archbishop was supposed to be suffering from consumption, a complaint which Cardan had represented himself as competent to cure. He is said to have been of great service to the archbishop, whose complaint proved to be asthmatical. Cardan was famous for his advocacy of the use of cold water, and may take rank with many physicians of earlier times, such as Asclepiades of Prusa (90 B. C.), surnamed cold bather; Antoninus Musa (30 B. C.), famed for his cure of Augustus by cold water; Galen (130 A. D.), Rhazes (923), and Avicenna (1036). Raymond of Marseilles (1755) gained a prize for the best treatise on the application of cold water in disease. It is interesting to note that Cardan's use of cold water was remembered and recommended by a physician more than one hundred years after his visit to the archbishop. I have no clue to the identity of Dr. Jennison. He may have been Dr. Jameson who took his degree at Oxford in 1668, became a candidate of the College of Physicians in 1671, and afterwards practised in London and Paris.

#### CONTRACT MEDICAL PRACTICE IN THE EIGHTEENTH CENTURY.

1698.—June 16. Mem.—Agreed with Dr. Pearson that he attend myself and family as often as our occasions shall require,

when he is not letted by other necessary attendance elsewhere; and that I am to pay him therefore every Martinmas two guineas.

Witness:

Mr. Farrington,

Mr. Ion,

Mr. Corney.

Jan. 13. Tooth drawn.

Accounts.

Jan. 13. Tooth drawn.

0.5.0.

The first of these entries shows that contract medical practice was not unknown two centuries ago, and it is obvious that the honor and glory of attending a distinguished ecclesiastic must have counted for something. The payment to the "tooth drawer" seems liberal in comparison with the annual salary of the family physician.

#### THE BISHOP'S LICENSE.

1706.—May 10. Mr. Blacket, an Irish Surgeon, applies for a License.

1711.—July 3. Licenses to a surgeon at Burgh & schoolmr. at Wmeloce.

Aug. 16. Mr. Henker licens'd Chyr'.

1713.—Aug. 5. A. D. Fleming an earnest dissenting suitor for a physick-license to Mr. Rigby, a dissenting preacher.

In the early days of the history of medicine the practice of the profession was mainly in the hands of ecclesiastics; and in course of time certain guilds and colleges were established. In the third year of the reign of Henry VIII (1511), owing to the quarrels of the said guilds and colleges formal application was made to parliament on the ground that the practice of physie was improperly supervised, and had fallen into the hands of smiths, weavers, and women. An act was obtained which gave power to ecclesiastical authorities to grant licenses to practice medicine and surgery. Under the provisions of this act any person was forbidden "in the city of London or within seven miles of the same, to take upon, to exercise or occupy as a physician or surgeon except he be first examined, approved, and admitted by the Bishop of London or the Dean of St. Paul's for the time being." Each of these dignitaries was required to associate with himself four doctors of physie before granting a license in medicine; and for surgery other expert persons in that faculty, who were to certify after due examination as to the fitness of the candidate. Midwives were also licensed by the same authorities, and readers of Sterne will remember that in *Tristram Shandy*, the first edition of which was published in 1759, Parson Yorick, upon the installation of a midwife in his parish, cheerfully paid the fees

of the ordinary's license himself, amounting in the whole to eighteen shillings and four pence.

#### ON SOME REMEDIES.

The following curious remedies are quoted:

1702.—May 27. Firr Tea, of shavings boild in two quarts of water down to one, and pour'd on 1-4 lb. white sugar candy for Hoarseness.

Nov. 8. Mr. Edward Finch's cure for ye collick, of griping of ye Guts, with 2 Quarts of Epsom Water; drunk hastily; of ye twisting of ye Guts wth an ordinary purge, and an addition of 2 grains of opium. Of a Rheumatism with Spirits of Wine, Sal Ammoniac & Lavender in a fomentation.

Nov. 27. After dinner with Josh. Barnes at the B. of Norwich's. My Ld. took occasion (on Mr. B.'s complaint) to teach us two infallible remedies for bleeding at ye Nose: 1. Inky cotton, ye older ye better: 2. The patient's standing up to ye knees in hot water.

1701.—Feb. 16. Wild sage supplies ye use of Hops; Assafoetida rubbed on ye dish ye best shalot.

1701.—Mar. 1. Sir Geo. Wenyn, gave me a long History of his life and troubles. . . . Sir G. a great eater of fruit all his daies; and had pippins prescrib'd for ye circulation of his blood.

Nov. 7.—Snuff of Asara Becca, very purging.

Brandy and Vinegar (with Infusion of Lavender-flowers and Rosemary) prescrib'd by Dr. Chambers for Sr. C's swelling. Strong beer, pepper and vinegar for same.

1702-3.—Jan. 10. Portugal-snuff an excellent remedy for a green wound.

#### ON REMEDIES FOR GOUT.

There are many prescriptions for gout from different sources. Archbishops and bishops seem to have prescribed for each other.

1704.—Dec. 26. A. B. of C. much in ye Gowt; for which my Ld. of York prescribes 50 drops of Sp. of Sal Ammoniac and Sal. Volat. Oleosu. mix'd in equal quantities; and ye B. of Sarum (as infallible) an Infusion of cloves in fair water.

1705.—Aug. 28. In medicine an easy purge by a Tea made of Sena and Scrophularia Major aquatica in equal proportions; and a sovereign drink against ye Gowt (sent to Dr. Middleton of Aberdeen from Dr. Schrader, ye publisher of Sylvius) by boyling two handfuls of Champepytis, instead of Hops, in 16 Quarts of wort; Tunn'd up & kept for ordinary drinking. It works wonders.

1711.—Mar. 10. N.B. A beer glass of simple distill'd water of sea and garden scurvy-grass (with ye juice of orange) sovereign medicine for the Gowt.

#### REMEDIES FOR STONE AND GRAVEL.

The two following remedies are selected from the diaries as of interest:

1705.—Sep. 14. Cons. Pearson's conversation singly. He saies ye Ribes Cinanchica, steep'd in Brandy is a specifick (abt. two spoonfuls in a morning) agt. ye stone or gravel.

1715.—Dr. Hikes' spl. sent relief in Fits of ye Stone. An ounce of powder'd Gum Arabic in a pint of warm posset. Drink. More effectual drops of Dr. Phrygenius; next door to ye Cock in St. James's Street.

#### A MEETING OF THE ROYAL SOCIETY IN 1705.

The society is usually considered to have been founded in 1660, and at first held its meetings in Gresham College. After the Great Fire of London in September, 1666, the apartments of the Royal Society were required for the use of the city authorities, and the society were therefore invited by Henry Howard of Norfolk to meet in Arundel House. The following entry, however, shows that the society at a subsequent period made use of Gresham College for the purpose of meeting, and gives an interesting account of the proceedings at one of their ordinary meetings. Under date Dec. 5, 1705, Wednesday, is the following entry:

The House not sitting to-day, I went (after dinner) to Gresham College: where I happily found ye Royal Society met, and had a lucky opportunity of being admitted a Fellow by (ye President) Sr. Isaac Newton. A letter was read, by Dr. Sloan, the Secretary, from a Chirurgion at Harwich, giving an Acct. of an extraordinary involution of the Gutts; wch occasion'd such an invincible stoppage, yt ye patient had not a stool in seven months before his Death. A Livonian Bible in 4to (printed at Riga in 1687) was presented, from a member resideing in those parts. Dr. Cockburn gave in a Discourse of his own, touching the weight of Humane Blood; and ye proportioning of medicines according to ye different gravity of that in Several Bodies. This was order'd to be publish'd in ye next monthly Transactions. These matters over, ye President & Fellows remov'd into ye adjoining Gallery; where Mr. Hawkesby, who had formerly entertain'd ym wth ye raining of Fire (in his Air-pump) and some other curious experiments on mercury, now shew'd 'em as odd phenomenon in striking fire in Vacuo.

## KING CHARLES AND HIS PHYSICIAN.

It is generally believed that the death of King Charles II was due to apoplexy, and the following entry in the diary, while supporting this view, points to the fact that the fatal attack was not the first which the "merry monarch" suffered from. The death took place in 1685, and under date Dec. 10, 1705, Bishop Nicolson writes:

Sr. Edmund King being Knighted for alleviating ye King's first Fitt of his Apoplexy, Fleetwd Shepherd wrote under his picture:

"This Dr.'s skill may surely be rely'd on,  
Who cur'd ye Kg. of ye Disease he dy'd on."

## ON SOME MINERAL SPRINGS.

The following entries refer to certain medicinal waters which seem to have been in general use:

- 1684.—July 6. Walk'd to Barnet wells in the morning. The water has a tincture of allum: & purges by stool and urine. Near akin to yt at Cummor near Oxford.
- 1685.—May 18. Mr. Weekes sett me to ye Spaws at Knaresborough. Sulphur Spaw very nauseous, & vomited as fast as drunk. Spaw ale.
- 1702-3.—Jan. 5. I took coach at St. James's for Kensington. Till Dr. Lampl. came home his sons carry'd me to ye gravel pits and newly discovered spaw. The water is exceedingly clear, and drinks soft and well; but tastes of no mineral. Its purging Faculty has been suppos'd to be communicated in ye summer by Art.
- 1704.—Oct. 18. Wednesday. Thence to Buxton: fine mountains and rough. . . . the Bathing well is at the D. of Devonshire's House (an Inn, lett at 60 lb.) a little below ye village; and is abt. nine yards and five broad. The water is lukewarm. Of Buxton Well and its antient and modern state, see more in what Dr. Jones and Sr. John Floyer have written on the subject.
- 1711.—June 20. Visitting ye spaw at Gilsland wells, more famous than it deserves.
- 1711.—Aug. 1. Wednesday. Mr. B. with me, visitting ye Iron spaw at Wigton.

So far as I can ascertain the wells at Barnet and Cummor are not now in use. The former place is twenty minutes' railway journey north of London. Cummor will be familiar to readers of *Kenilworth*, and is associated with memories of the unfortunate Amy Robsart. The popularity of Knaresborough has been

eclipsed by the neighboring town of Harrogate,\* the municipal authorities of which have spent large sums in erecting all kinds of baths, and thousands resort yearly to try the healing effect of the many springs which are to be found there. Buxton also has long been a popular resort, especially for the gouty. Gilsland is still frequented to a small extent, but although the writer is a native of the Wigton district, he is not aware of any chalybeate spring.

#### A FATAL CASE OF SMALLPOX.

1704.—Aug. 23. Thursday. In ye evening, news brought of Cous. Grace Tate's death; ye smallpox having flatted on her, being before weaken'd by a hard labour: And thus (on a suddain) her beauty drap'd in Deformity. *Quam fragilis!* This week I have had one or two nearer calls to think on my own latter end. For weh may my merciful God prepare me!

Readers of Sydenham will remember the very minute and careful observations which he made as to the prognosis of this disease, and how he refers to the dangers of the pustules becoming flat. In a copy of the *Works of Sydenham* by Dr. John Peehey, 1729, p. 86, there is the following statement of opinion:

"There are also other symptoms that sometimes arise from a cause contrary to those above mention'd, to wit, when the patient has been injured by violent cold, or excessive bleeding, without reason, or by being over purged, the pustules sometimes flat on a sudden, and a looseness supervenes, so that the patient, if he be adult, as we have hinted before, is in great danger, for the variolous matter being struck in, Nature is altogether unable to eject them as she ought by the Pores of the Skin."

#### PRECAUTIONS IN BLOOD LETTING.

1704.—Oct. 8. Mr. Railton, ye Apothecary, came to let me blood. But coming after Dinner, he found me too warm; and deferr'd it till to-morrow morning.

Oct. 9. Tuesday. I was blooded in the morning, on ye left arm, by Mr. Railton, ye Apothecary, who thought my Blood a little Inflamed. I bled so freely, yt ye orifice was not easily stopp'd.

It is probable from the above entry that the bishop as was usual at that period, had recourse to blood-letting in the spring and autumn. In the entries immediately before and after those referring to his bloodletting there is no mention of any illness.

\* Harrogate has been known as a sanatorium and health-with-pleasure resort for seven centuries. King John brought his Queen to Knaresburgh, whence she "took the waters." But even in the days of Bishop Nicholson it was a very small place, and "its name was never mentioned in connection with its famous waters, which were known to the world under the designation of 'The Knaresborough Spaw,' for in that town the water drinkers were obliged to make their abode." (See "History of Harrogate," by William Grainge, 1617, p. 111.)

and on October 15th, six days after the operation, he states that he started with several friends to London, a journey involving a considerable amount of fatigue in those days.

#### MEDECINA GYMNASTICA.

1705.—Sep. 6. Dr. Pearson and Mr. Lowthian dined with us; and the former mightily in love with Mr. Fuller's *Medecina Gymnastica*, by ye help of which he has set Sr. Ed. Hasell on his legs.

The work referred to in the above entry was erroneously attributed to Thomas Fuller, M.D., who took his degree at Cambridge in 1681, and was the author of several medical publications. In the Roll Call of the Royal College of Physicians, in referring to these publications, the author says that the *Medecina gymnastica* was the production of Francis Fuller, A.M., of St. John's, Cambridge, who died in 1706 (see Nichol's *Literary Anecdotes*). —*The New York Medical Journal and Philadelphia Medical Journal*, Dec. 9, 1905.

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#### ABSTRACTS.

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**Action of X-Rays on the Tissues.**—E. Dalous and J. Lasserre Toulouse (*Annales de Dermatologie*, Paris), write: The microscope reveals that there are certain special lesions due to the action of the Roentgen rays on the epithelium, an actual "radio-epithelitis," as Dalous styles it. Similar modifications occur in the tissue of a neoplasm, and as they develop they induce a macrophagic connective-tissue reaction. All the cells of the neoplasm do not feel the effect of the rays to the same degree, some being more sensitive than others. In the sound epithelium the basilar layer, or *stratum germinativum*, and the cells of the mucous layer, immediately above, are affected most, and the corresponding cells in an epithelioma. On the other hand, the cells of the prickly layer and of the horny layer are too firmly interlocked and too large to be effectually attacked by phagocytosis. The latter process, besides, seems to be secondary in importance. The histologic findings described explain why epitheliomata of the type of the caneroid and the squamous epithelioma are less favorably influenced by radio-therapy than epitheliomata of the baso-cellular type, columnar epithelioma and rodent ulcer. The Roentgen rays are decidedly elective in their action. The most sensitive cells in the neoplasm are those which are derived from cells which normally are most sensitive to the action of the rays.



In cutaneous epitheliomata, therefore, the squamous and the columnar types, the former are resistant to the X-rays and the latter succumb to them, corresponding to the elective action of the X-rays on the cells of the sound epidermis.

**Pathogenesis of Pulmonary Tuberculosis.**—F. Weleminsky, Prague (*Berliner klinische Wochenschrift*) has revealed the exceptional position occupied by the bronchial glands in the lymphatic system. Guinea-pigs were infected with tuberculosis at various points and the glands examined later. It was found that the infection never occurred through the blood, but always by way of the lymphatics. The bronchial glands seem to be the terminal reservoir, not only for the lung lymph, but also for the lymph from the rest of the body before it is poured into the blood system. When animals were inoculated in the peritoneum, rectum, or subcutaneously in the groin, at first it seemed as if the infection followed an arbitrary, erratic course, but the discovery of hidden glands showed the regular sequence of the progress of the infection, without an exception, in his last 300 experiments. The bronchial glands are like a kind of heart, into which the lymphatics from all sides discharge their contents, including tubercle bacilli from remote points of entrance.

**Relation of Fat to Infantile Marasmus.**—From a paper appearing under this title by A. Stern, New York (*Archives of Pediatrics*, New York) the following data may be gleaned. The overwhelming majority of cases of infantile marasmus occur in artificially nourished children. The gastrointestinal disturbances underlying infantile atrophy are very often due to the character of the food and not infrequently to its fatty contents. While the quantity of fat aliment has found frequent practical consideration, the chemical character of the fatty substances entering into the baby's nutriment have hardly ever been enquired into by the clinician. The composition of the fat of cow's milk is greatly at variance with that of the fat of human milk, differing especially in its far greater contents of volatile fatty acids, among which butyric acid is the most important. Butyric acid is the mother substance of the acetone bodies to the presence of which a number of disorders to which the infant is prone have been ascribed by various observers. Butyric, caproic, caprylic and capric acids are contained in the fat of cow's milk in from six to eight times the amount in which they are present in that of human milk. The infantile organism can not cope successfully with the fat of cow's milk even in a mere physical sense. This is evidenced by the decidedly smaller absorption of the fat compound derived from cow's milk than from human milk. The

occurrence in the feces of absolutely and relatively larger amounts of fat of cow's milk is *prima facie* evidence of its more incomplete utilization by the youthful organism. As the physical and chemical properties of the milk fat are dependent on the absolute and relative amount of lower and higher and uncombined fatty acids, it is evident that the vast discrepancy existing between the constitution of cow's milk fat and mother's milk fat can not be overcome by any possible modification of the former. Apart from the butyric acid origin of the acetone bodies we find that the volatile fatty acids as furnished by the fat of cow's milk are decided irritants of the delicate intestinal mucosa of the infant. The ingestion of these acids, therefore, is the primary cause of many instances of gastrointestinal irritation and disease followed by undernutrition and bodily retrogression. Alteration in the fat supply as exercised to-day is almost without exception a quantitative one, consisting of reduction, suspension and even increased supply of fat ailments. Withdrawal of milk fat in hand-fed infants frequently results in cessation of the local disturbance. It is obvious, however, that the infant can not exist for any length of time without fatty ingesta of some kind. Furthermore, the incipient marasmic condition can not be relieved unless a sufficient amount of assimilable fats yielding but insignificant amounts of volatile fatty acids is added to the nutriment. Yolk fat seems to be the ideal fat for infants suffering from chronic gastrointestinal disturbance, together with latent or even pronounced atrepsia infantum. Yolks should not find employment in the newborn nor in the infant which thrives on the physiologic nutriment or on a modification of cow's milk. Yolks should be used only in those pathologic conditions which may lead to atrepsia infantum and in those which are due to or aggravated by the fat constituents of the nourishment. There are two essentials which must be followed for good results from the ingestion of yolks, viz., the yolk fat must completely replace the milk fat, and the amount of yolk fat, without being in excess, must be adequate, that is, it must conform to the caloric and nutritive demands of the organism. The electrical conductivity of skimmed milk plus physiologic amounts of yolk fat is probably somewhat greater than that of native milk.

**Bronchitis in Children.**—In the common form of bronchitis in children that so often follows measles, whooping-cough, and acute infectious diseases in general, the following combination has been administered with good effect: Ichthyol, min. xxxii.; glycerini, spt. auranti, aa, ℥ss; aque, ad, ℥ii. The first dose often causes nausea, vomiting, but later the child grows inured to the taste of ichthyol. Children under one year of age do not

take ichthyol well. To avoid the unpleasant effects of ichthyol it should be given after meals. Increasing doses are not necessary for good results in children.—*Walter B. Jennings.*

**Therapeutic Value of Lecithin.**—Attention has been drawn of late to the therapeutic value of lecithin, many observers having noticed a marked improvement of the blood after the remedy had been taken for some time. F. Levy has interested himself in the theoretical side of the question, and has made quite a number of analyses to determine if the metabolism of the body is really stimulated. He found that with lecithogen, a cacao containing a certain proportion of lecithin, the amount of phosphorus excreted with the urine is increased, while the percentage of nitrogen remains about the same. In impoverished blood, the remedy often does more good than iron: it shows its beneficial influence particularly in secondary anemias. The amount of lecithin contained in the various nutritive preparations on the market is generally 1 per cent., but this seems to be sufficient to bring about the desired results.—*Berl. klin. Woch.*, 1905, No. 39.

**A New Principle of Ergot.**—E. Valden has succeeded in isolating from ergot an active principle which he reports stimulates the contractions of the uterus and is soluble in water, but does not cause convulsions or gangrene. This substance, termed clavin, is probably a chemical entity, since it forms characteristic crystals if an aqueous solution is allowed to evaporate. It is free from all poisonous properties and may also be injected subcutaneously without causing irritation. A solution should always be prepared shortly before use, since it will not keep long. Tablets are now on the market, both for subcutaneous and internal use. The former contain 0.02 gm. (1/3 gr.) of clavin and 0.08 gm. (1 1/3 gr.) of salt, and are to be dissolved in 1 c.c. (15 min.) of water.—*Deut. med. Woch.*, 1905, No. 32.

**Association of the Fusiform Bacillus and a Spirillum.**—H. Vincent, Val-de-Grace (*Annales de Dermatologie*, Paris) has been continuing his researches on the symbiosis of the fusiform bacillus and a spirillum which induces the affection known as Vincent's angina. Its occurrence has been reported in all countries, generally affecting persons between eighteen and thirty. His own experience has been that it forms 2.26 per cent. of all cases of sore throat. The fusiform bacillus is a normal inhabitant of the buccal cavity, it is ubiquitous, like the tetanus bacillus, and, like the latter, requires special conditions for its development. These conditions are depressed vitality from any cause,

starvation, cachexia, or chemical or microbial intoxication, with a lesion caused by some other microbe. When the organic defences are broken down, the fusiform bacillus installs itself and is liable to proliferate to an amazing extent, causing vast suppurations when air does not reach the parts. In 17 cases of subperiosteal dental suppuration he found this fuso-spirillar symbiosis in seven instances, and once in pure cultures. This symbiosis was also found in eleven out of nineteen cases of appendicitis, in periostitis of the tibia or fetid abscess of the leg, etc. He is convinced that noma and gangrene of lungs or pleura are the result of fuso-spirillar infection. The angina due to this symbiosis he regards as a kind of hospital gangrene of the mouth. The superficial lesions are identical under the microscope, but in the depths the fusiform bacillus vegetates alone, with a necrobiotic and hemorrhagic action. He adds the literature, which amounts already to 131 articles since his first publication in 1896. Inoculation of a healthy person with hospital gangrene or the fuso-spirillar combination induces merely an insignificant reaction and lesion.

#### **Thiosinamine in the Treatment of Urethral Strictures.—**

E. Remete (*Centralb. für die Harn- und Sexualorgane*, 1905) employed thiosinamine in 20 cases of urethral stricture of various calibre. He injected 15 gr. of a 15 per cent. alcoholic solution between the skin and the muscles of the back twice weekly; the pain of the injection was combated with cocaine injections. In the majority of the cases the method produced a decidedly favorable result, and one which could easily be noted. He did not get, nor did he expect to have, an agent which, without other assistance, would dilate the stricture, but he did get a remedy which softened the stricture so much that gradual dilation was made much easier and cured the patient much quicker. The best results were obtained in strictures of medium calibre. He explains the action by considering that thiosinamine so improved the heart action as to give the vessels of the scar tissue a better blood supply and thus a tendency to soften.—*Amer. Med.*

**Types of Cirrhosis of the Liver.**—Besides the types usually observed, C. Alessandro (*Gazzetta degli Ospedali*, Milan) has encountered cases of cirrhosis of the liver with chronic icterus, slight hypertrophy of the liver and enormous hypertrophy of the spleen. He reports such a case and also one of still another type of cirrhosis of the liver. In the latter the liver is of normal size or slightly smaller than normal, and the spleen is also normal, but the kidneys are the seat of severe and constant lesions, the result of the severe and chronic icterus. Alcohol probably aids the de-

velopment of this type also. The case he describes was in a mechanic of 49, addicted to liquor. The influence of the alcohol in these cases is like that of the typhoid toxins in the cases of cirrhosis of the liver following typhoid fever. The long interval that may elapse before the first symptoms appear is not an argument against this etiology, as osteomyelitis and gallstones may likewise remain latent for a long time. In one such case the biliary symptoms developed almost at once, while the cirrhosis did not manifest itself until nine years later. Agglutination was positive, even at the tenth year.

**Prognosis in Posterior Basal Meningitis.**—O. Hildeheim (*British Medical Journal*, March 31st) claims that it is almost impossible to give any prognosis early in the disease. Although the prognosis is better the older the child, nevertheless one-third of his patients who recovered either completely or partially were under six months of age at the time of the onset of the disease. In not a few cases the prognosis depends largely on careful and unremitting attention to the artificial feeding of the child, and every effort should be made to avoid setting up a catarrh of the nasopharynx and respiratory system.

**Influence of Pancreatic Juice and of Bile on Intestinal Digestion.**—T. Brugsch (*Zeitschrift f. klinische Medizin*, Berlin) concludes his extensive monograph with the statement that processes affecting the functions of the pancreas and reducing the output of pancreatic juice diminish the absorption of fat in the intestines, but scarcely affect the splitting of the fat. He found, further, that uncomplicated exclusion of the bile was accompanied by a loss of about 45 per cent. of the fat in the stools. Consequently, if a larger proportion of fat is lost, it suggests participation of the pancreas in the trouble causing the icterus. When the pancreatic juice is shut off and the bile nearly so, from 80 to 90 per cent. of the fat is lost. The average loss of nitrogen in uncomplicated icterus is about 11 per cent., but when accompanied by a pancreatic affection, about 33 per cent. The carbohydrates are well utilized in cases of pancreas affections. Accelerated peristalsis in the small intestine is liable to entail a loss of fat up to 40 per cent., even when the secretion of bile and pancreatic juice is normal. Catarrh of the small intestine also hinders absorption of nitrogen and fat. When the proportion of dried stool is over 30 per cent., it should arouse suspicion of disturbance in the absorption of fat. The proportion of fat in the dried stools in case of icterus may amount to 80 per cent.; the average in case of a pancreatic affection is 60 per cent. In case of considerable loss of nitrogen the percentage of fat can drop still lower, and hence

the proportion of fat in the stools should not serve alone as a sign of a certain disturbance in the absorption of fat. He adds other conclusions from study of diabetics and of dogs after removal of the pancreas. He did not find any essential difference in regard to the absorption of fat and nitrogen in man and in dogs after exclusion of the pancreatic juice. The particulars of his research on 15 patients are given in detail.

**Antibacillary Serum in Experimental Tuberculosis.—**

S. Livierato (*Gazzetta degli Ospedali*, Milan) has been treating animals with an aqueous extract of living tubercle bacilli. Their serum acquired antibacillary properties with little antitoxic power, but it agglutinated when diluted 1 to 2,000. About 1.5 mg. of living, virulent tubercle bacilli, all from the same culture, with 1 c.c. of salt solution were put in small collagen sacs. The sacs were then placed between the loops of the intestine in guinea-pigs, one in each animal. The animals were then separated into three groups: the first group received no treatment, the second group was treated with serum from tuberculous patients, and the third group with the prepared antibacillary serum. The latter displayed marked curative power, preventing the development of the experimental tuberculosis in the animals and killing the bacilli in the test tube. The serum of tuberculous patients failed to show any curative action.

**Erythema Scarlatiniform and Scarlet Fever.**—J. Beard and T. W. N. Barlow (*The Lancet*, London, December 31st) direct attention to three important points in the differential diagnosis of these two affections: 1, The very early onset of desquamation; 2, the desquamation taking place while the erythema is in the florid stage, and 3, the erythematous base observed after desquamation and which remains for some time, with its peculiar glistening and greasy appearance.

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## Editorials.

### THE REPORT OF THE REGISTRAR-GENERAL OF ONTARIO FOR THE YEAR ENDING DECEMBER 31st, 1903.

THE report of the Registrar-General of Ontario for the year ending December 31st, 1903, shows that there were registered in this Province 48,742 births (including still-births), 25,071 being male and 23,671 female infants, which is equal to a rate of 22.1 per 1,000 living persons. The estimated population of this Pro-

vince, June 30th, 1903, was 2,198,692. In adjoining States and Provinces the birth rate was as follows:

|                    |                |
|--------------------|----------------|
| Quebec.....        | 34.05 per 1000 |
| Rhode Island.....  | 25.09 "        |
| Connecticut.....   | 22.5 "         |
| Vermont.....       | 21.9 "         |
| New Hampshire..... | 20.04 "        |

In the opinion of the Registrar-General, the birth rate in this Province is unsatisfactory; natural conditions are being interfered with, or supplanted by those of a preventive character and criminal in tendency. The illegitimate birth rate in Ontario for the year was 782, or in the proportion of 16 per 1,000 births—a figure much below that recorded in England and Wales for 1902, viz., 39 per 1,000, or that recorded in Scotland for 1902, viz., 62.8 per 1,000.

The marriages registered in Ontario for 1903 numbered 19,830, corresponding to a rate of 9.0 per 1,000 of the total estimated population. Some of the marriage statistics of other countries are as follows:

|                               |               |
|-------------------------------|---------------|
| Rhode Island (1902).....      | 9.23 per 1000 |
| New Jersey (1902).....        | 9.22 "        |
| Vermont (1902).....           | 9.15 "        |
| New Hampshire (1902).....     | 9.69 "        |
| Connecticut (1902).....       | 8.14 "        |
| England and Wales (1902)..... | 7.9 "         |
| Quebec (1902).....            | 6.4 "         |
| Ireland (1902).....           | 5.2 "         |

The marriages registered in Ontario are, therefore, similar in number to those of the adjoining States, but in excess of those of the Province of Quebec, as well as of those of England and Wales, and notably of those of Ireland.

The deaths registered in Ontario for the year 1903 numbered 29,664 (including still-births), being in the proportion of 13.4 of the total population. It would appear that the health of this Province is good, when this death rate is compared with those of other countries, as taken from the returns of 1902:

|                        |               |
|------------------------|---------------|
| Quebec (1902).....     | 18.2 per 1000 |
| Scotland.....          | 17.2 "        |
| New York.....          | 17.0 "        |
| England and Wales..... | 16.2 "        |
| Vermont.....           | 16.0 "        |
| Rhode Island.....      | 15.9 "        |
| New Jersey.....        | 15.9 "        |
| New Hampshire.....     | 15.87 "       |
| Connecticut.....       | 15.2 "        |



There were a good many deaths from typhoid fever in the cities of the Province, Kingston showing an increase of 17 deaths more than in 1902. In towns, such as Sarnia and Sault Ste. Marie, there were also a good many deaths from this disease—facts which prove a polluted condition of the potable waters used in these cities and towns. That the mortality from typhoid fever in Ontario was greater in rural districts than in populous centres was shown in 1902, when Algoma, Muskoka, Nipissing, Parry Sound, Rainy River and Thunder Bay—districts to which tourists flock in the summer months—had a typhoid death rate of 0.49 per 1,000 of population, while Toronto in 1902 had a typhoid death rate of 0.14 per 1,000.

The mortality from smallpox increased in 1903, there having been 21 deaths from that disease, as compared with 7 in 1902.

Whooping cough proved fatal in 204 cases. The reduction in deaths from measles was, however, 61.5 per cent.

Scarlatina showed an increase in mortality of 64.2 per cent. over the figures of the preceding year, the increase occurring in the rural districts.

Of the 687 deaths due to diphtheria and "croup," 248 deaths, 34.6 per cent. happened in the cities, being 15 in excess of the mortality from this disease in 1902.

Deaths from influenza increased by 70 per cent. over the rate during 1902, the majority of deaths from this cause occurring in the rural districts.

The maximum of deaths from tuberculosis was reached in Ontario in 1900, when 3,484 deaths from this disease were recorded. Since that year there has been a reduction in the mortality from this disease in Ontario, viz., 3,284 in 1901; 2,694 in 1902; 2,723 in 1903.

Cancer, which includes carcinoma, sarcoma and "malignant growths," caused 1,156 deaths, and of these 534 were males and 622 females. The largest number of deaths from this disease occurred in the age group, 60-69.

The deaths from diseases of the nervous system numbered 3,279, being 11 per cent. of the total deaths for the year.

During 1903, 2,590 persons died of diseases of the circulatory apparatus. The greater number (1,993) are said to have died of "organic heart disease," an increase of 308 deaths, or 18 per

cent. over the figures of the preceding year being ascribed to this disease.

Under digestive diseases the total deaths registered were 2,725, or 9 per cent. of the total deaths from all causes; 1,091 deaths, or 40 per cent., were due to cholera infantum. The Registrar-General states that the mortality from this disease could be materially diminished if mothers and nurses engaged in raising infants were better educated in the methods to be adopted, and the dangers to be avoided, in the alimentation of infants.

It is stated in the report that 249 deaths were the sub-group, which includes and is largely made up of deaths from appendicitis.

The total deaths from diseases of the genito-urinary organs were 1,053, of which 630, or nearly 60 per cent., were due to either acute or chronic nephritis (Bright's disease), and 366 to other diseases of the kidney or bladder.

Of the 234 deaths in the group of "puerperal diseases," 42 were due to puerperal septicemic affections, or 8.6 per 10,000 births, which is a low figure in comparison with the mortality in England and Wales for the same year, viz., 4.07 per 1,000 births. The chief points of interest in the remaining groups of diseases are the 1,265 still-births; the 2,585 deaths from congenital debility and malformations, and the 3,343 deaths from "senile decay."

There were 125 deaths from suicide; 1,241 deaths from accident, a little over 4 per cent. of the deaths from all causes.

During the year 807 deaths were registered, which were useless for statistical purposes. The Registrar-General expresses the hope that in future physicians in Ontario will endeavor to be more careful in filling in death returns.

J. J. C.

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### TRACHOMA.

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TRACHOMA (*τραχως*, rough), granular eyelids, granular conjunctivitis, is a contagious, palpebral conjunctivitis, characterized by the formation of granulations on the conjunctiva of the eyelids with subsequent cicatricial contraction and deformity. The disease is communicated by one individual who has trachoma to

another individual. The contagion arises from the use of the same handkerchief, towel or washbasin, the contagium being conveyed by the fingers, towel or handkerchief to the eyes, and not through the medium of the surrounding air. This disease speedily becomes epidemic in crowded orphanages, almshouses and other institutions if precautions are not taken to segregate patients with trachoma from the other inmates. It is thought that the lymphatic or serofulous temperament predisposes to it; but persons, who previously enjoyed good health, may, if exposed to the contagion, be attacked by the disease. Although it is caused by a microbe, its special micro-organism has not yet been isolated.

The prognosis is very grave. It is contagious, is characterized by serious consequences to vision, and is very chronic in its duration. Relapses occur frequently and persistently, and a relapse may occasion all the intense inflammatory symptoms of acute granular conjunctivitis. The continuance of trachoma is to be reckoned by many years, and while some cases of this disease arrive at a condition of comfort in less time, it is not rare for ten, or even twenty years, to elapse before the final stage is attained.

According to the kind of granulation present, three varieties of trachoma were formerly distinguished: *T. sabulosum*, with gritty granulations like sand; *T. carunculosum*, fleshy excrescences, and *T. herpeticum*, hard pustules on the inner surface of the eyelids. The essential feature in its pathology is the lymphoid cell. These lymph cells are scattered through the conjunctiva, forming adenoid tissue. These cells (sago grain granulations) must be sought for on the mucous surfaces of the eyelids. At first they occur principally on the lower retro-tarsal fold of the conjunctiva, spreading gradually to the same position above and finally affecting the entire lid surface. The ocular conjunctiva often participates in the vascularity, and small granulations may even occur on it. Vascularity and cloudiness of the upper part of the cornea (pannus) follow the vessels here lying immediately beneath the epithelium; this condition sometimes extends over the entire cornea, and especially when there are inverted lashes. There is no tendency to spontaneous cure, and a long continuance of the chronic changes generally leads to entropion, trichiasis and often corneal mischief. The Jews, the Irish, the inhabitants of

the East and the North American Indians seem specially liable to it; negroes are said to be practically exempt from it.

The influence of residence at a considerable altitude above sea level on the existence of this disease is worthy of note. In the city of Mexico, which has an altitude of 6,000 feet above sea level, trachoma is very rare. Good hygiene is not responsible for this exemption, because the hygienic status of the lowest classes in Mexico is of the worst. Neither does the influence of race account for it, for many different races are included among the lowest classes of the city of Mexico. The great elevation of the city of Mexico above sea level is thought to be the efficient cause of this exemption from trachoma (Chacon, *Gaceta Medica de Mexico*, June 1, 1902). Extreme dryness of the atmosphere at this altitude, causing desiccation of germ life, and a long exposure of the soil to intense sunlight, might singly or conjointly cause the destruction of the microbes of trachoma, which must find entrance into the city of Mexico as well as elsewhere.

This, however, is mere speculation. Orphanages there are in the city of Mexico, just as there are orphanages in New York or Toronto. Statistics showing the incidence of trachoma among the inmates of the orphanages in the Mexican city could be compared with statistics relating to an American or Canadian city. This seems a logical proceeding before one starts to formulate theories referring to the repression of trachoma in orphanages, or to indicate the best means of dealing with immigrants (children or adults), who are suffering from this disease.

Without being self-contradictory, the rarity of trachoma in the city of Mexico induces one to think that a suitable environment for the trachomatous immigrants of the United States or Canada could be found on the high plateaus of the Rocky Mountains. It would certainly be more reasonable to send trachomatous immigrants for treatment to some elevated location, 6,000 feet above sea level, than to immure them in detention hospitals by the damp seaside at New York or Halifax.

J. J. C.

**OF THE MAKING OF CORONERS THERE IS NO END.**

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How times change! A few years ago a dozen, at most, men well qualified were considered more than enough to execute the duties connected with the high office of coroner in this city of Toronto. Now a coroner-in-chief does most of the work, and does it worthily, at a small remuneration. However, without pestilence, war, scourge or quake of any kind to increase the death rate, an associate coroner is appointed almost every Monday morning. In the name of common sense, what use is their appointment to them? The ratio of deaths requiring an inquiry is not sufficient to supply them with a subject once in many moons.

The golden egg so freely given out by the Government lately is only china; there is nothing in it and it never hatches out. The whole outfit at present is a farce, no properly equipped morgue to hold an inquest in, a horde of idle coroners waiting for a chance to preside over twelve good men and true, and some of them, we almost dare to affirm, have never since graduation given a week's consecutive study to medical jurisprudence, and as for common law, they would look surprised, almost grieved, if one suggested such a study to them. These fledglings of coroners are all good physicians, capital men and friends, and in every way a credit to their profession; but do not let us forget that Rome by any name, was not built in a day. The sooner this vaudeville performance stops the better, or the public press may ask a question or two that will make some one sit up, or sing a top note. A reasonable arrangement would be to appoint, say, four assistant or deputy coroners, picked men, appointed only after stiff examination, who, with the coroner-in-chief, would do all of the work for Toronto. Cheerily goes on the new Automobile Bill before the House. Are the promoters, perchance, seeing a way to provide material for the coroners in framing the regulation that searchlights are to be abandoned? It's a pity of the old, the new and the coroners-to-be at the present moment. They are in a foolish position, and the office is robbed to some extent of its dignity.

Further discussion of this subject is useless, as it is best dealt with in the good old Yankee way by asking a question—Why?

W. A. Y.

### THE DIRE NECESSITY OF THE PHYSICIANS OF SAN FRANCISCO.

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OF the awfulness of the disaster to the citizens of San Francisco only a vague idea, we believe, have we received even from the apparently full accounts recorded in the daily press and in the letters from friends. We have been assured that among the greatest sufferers are the physicians. In many cases they have lost everything, and a medical man without a book, an instrument or the means to in any way better his condition, commends himself to not only our sympathy, but our practical energy. We can all help a little; let us do it, and let our aid be given to the Canadian physicians resident in San Francisco. Kindly send anything, everything, with a name or anonymously, to the "San Francisco Physicians' Fund," CANADIAN JOURNAL OF MEDICINE AND SURGERY, 115 College Street, Toronto, and the same will promptly be forwarded to the Mayor of San Francisco for the purpose indicated.

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### EDITORIAL NOTES.

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**X-Rays and Anti-diphtheritic Serum in the Treatment of Pernicious Anemia.**—In a paper read at a meeting of the Medical Society of the Hospitals (*La Presse Médicale*, March 14th, 1906), Drs. Louis Renon and Leon Tixier report the successful treatment of a case of pernicious anemia with X-rays and anti-diphtheritic serum. The patient, a woman, had already received arsenical treatment, but without favorable results. On the other hand, restoration of her blood to a normal condition resulted either from the X-rays or the anti-diphtheritic serum, or from both of these agencies together. The authors do not lay stress on the clinical features of the case, because temporary improvement is often noted during the treatment of a case of pernicious anemia; more reliance is placed on examinations of the blood. These examinations showed that restoration of the patient's blood took place under the influences of the physical and chemical agencies employed. Examinations of the patient's blood made during the

hours which succeeded the use of the X-rays and the injections of anti-diphtheritic serum, showed stimulation of the hematopoietic organs, which was disclosed by a notable increase in the number of red blood cells, by an eosinophilia as remarkable for its continuity as its intensity, and finally by the presence in the blood of polychromatophil blood cells, the young elements of the bone marrow. The authors remark that these similar results, obtained by procedures so different in appearance, show the parallelism existing in the mode of action of these different therapeutic agencies. The presence in the blood of leucotoxins (products of the destruction of white blood cells by X-rays, or of hemolysins (after injections of anti-diphtheritic serum) is, doubtless, an indispensable and necessary factor in determining a reaction of the hematopoietic organs on these conditions. Drs. Josue and Roger have shown that anti-diphtheritic serum causes a special action in bone marrow, which relates almost entirely to the nucleated red blood cells. If diphtheritic toxin is injected into a rabbit, the reaction obtained in the creature's blood relates chiefly to the white blood cells. When diphtheritic toxin and anti-diphtheritic serum are injected simultaneously, the twin reactions become associated; a great number of red blood cells and also of myelocytes (marrow cells) may be noted.

**A Practical Preventive of Typhoid Fever.**—Typhoid fever excreta, discharged just outside the roadbed of railways, may be washed by rain or melting ice and snow into streams, or may be discharged directly into streams running transversely to the roadbed. People using potable water drawn from such streams are exposed to the danger of catching typhoid fever. The germs of typhoid fever are also discharged into fresh water lakes, rivers and canals—the Muskoka lakes, for instance—from yachts and other boats plying on these waters. To prevent the discharge of excreta on the roadbeds of railways a corrective measure is suggested by Dr. Frederick Griffiths, in a letter published in *American Medicine*, March 31st, 1906. This writer recommends that every railway hopper be closed at the bottom and that excreta be not discharged on or near a railway track. To accomplish this desideratum a metallic receptacle of a suitable size should be suspended beneath the body of the car. At division points these

receptacles may be changed or cleaned, and their contents committed to the sewers. Another plan suggested is: that the receptacle for excreta be made stationary and fitted with a pipe and valve below and a flushing pipe above. At the end of a trip connection may be made with the sewers at a depot, similar to the method employed in air-brake pressure reservoirs, and the receptacle thoroughly flushed out. It occurs to us that at our inland ports a similar plan of disposing of the excreta collected on lake and river steamers and sailing boats might be adopted. If sewers are not available, septic tanks could be installed at one or more ports to receive the excreta collected from the boats, the effluent being still further cleared by allowing it to filter through sand. However, if raw sewage is discharged from the sewers of a town into a lake or river, which is used as a source of potable water, steamboat owners may naturally object to the substitution of a metallic receptacle for the open hopper closets at present used in their boats. When the sewage of a town is treated in septic tanks and subsequently filtered before the effluent is discharged into a lake or river, the authorities of that town will be in a position to demand reforms in the methods of disposing of excreta from railway corporations and steamboat companies doing business in or near the town or along its water front.

**A New Sign of Hereditary Syphilis in the New-born Infant.**—V. Jonkow-ski (*Meditsinskoé Obozrénie*, 1905, No. 7, pp. 473 to 780) mentions a new sign indicative of hereditary syphilis in the new-born infant; from its birth the upper layer of the skin is dry and mobile. In some infants this sign is only remarked on certain parts of the body—the chest, abdomen, more rarely on the limbs, and in some cases only on the soles of the feet, or the palms of the hands. When well marked, it seems that the lightly raised stratum corneum of the skin covers the infant's body like a shirt made of some fine tissue. At each movement made by the infant the skin seems to make an independent movement of its own revealing itself in slight brilliant undulations. After a few days desquamation appears, beginning with deep cracks of the skin, followed by hemorrhagic spots. In cases in which this sign was well marked, the infants were affected with aphonia and did not live over six days. An anatomo-pathological examination of



their viscera always confirmed the diagnosis of syphilis, although, during life, the above-mentioned sign was the only visible indication of the disease. Some of these infants died suddenly. Ordinarily the cracks in the skin appeared, first, at the articulat foldings of the limbs, and, later, on other parts of the body. The author had in all eighteen cases, of whom twelve died during the first week, two on the tenth day, and four were taken from the hospital. Histological examination showed that the whole skin was atrophied, but that the stratum corneum was thickened and adhered imperfectly to the underlying layer of the skin. There were numerous vacuoles in the cells of the mucous bodies. There was hyaloid degeneration of some of the connective tissue bundles of the derma; the elastic fibres were rare.

#### **Wounds Caused by Friction and Traumatic Ulcers.**—

Dr. Secretan (*Revue Médicale de la Suisse Romande*, 1906, Vol. xxvi., No. 2, p. 61) draws attention to the peculiar evolution of certain wounds caused by friction. These wounds are produced by the rubbing of the integument against some massive body (a large stone, a grindstone), or a fall into a well; they generally appear in the form of a slight contusion, or even as a more or less limited superficial excoriation. The first appearance of such an injury seems to warrant a favorable prognosis; but frequently such an opinion proves erroneous and the wound heals very slowly. In one case of contusion, caused by friction from the fall of a large stone, the resulting excoriation of the derma took three months and eight days to cicatrise. In four other cases of contusions and excoriations, caused by friction, complete cicatrization took from two to three months. In these cases, diathetic conditions, such as syphilis, alcoholism, albuminuria, scrofula, poor circulation, defective alimentation, did not exist. Neither was malingering practised in order to prolong the period during which the injured workmen, who were insured, would be exempt from work, or to enable them to draw a larger indemnity. The cases were watched by the surgical attendant; the dressings were often marked privately, and yet no evidence of bad faith on the part of the injured men was discovered. Dr. Secretan thinks that the slow healing of the wounds in these cases was due to the nature of the injuries. He thinks that friction diminishes apti-

rude for healing in injured tissues much more than a direct blow. Violent friction causes a sort of torpor of the tissues, which subsequently do not heal in a kindly way and are prone to slough. This injury is a sort of trophic lesion, having a tendency to ulceration and sloughing—characteristics which are also noted in traumatisms caused by the action of radiant heat, electricity and radium.

#### **International Medical Association for the Suppression of War.**

—We have much pleasure in publishing a circular recently issued by the International Medical Association for the Suppression of War. Dr. J. A. Rivière, president of this association, is also chief editor of the *Journal and Annals of Physico-therapy*, Paris. The resolutions are worthy of the endorsement of all philanthropists. "At a general meeting of the International Medical Association for the Suppression of War, held March 21st, 1906, at the offices of the association, 25 rue des Mathurins, Paris, Dr. J. A. Rivière in the chair, a large number of physicians of all nationalities adopted the following resolutions: (1) In future all international conflicts should be settled by two tribunals (The International Tribunal and The Humanitarian Tribunal), normally and properly constituted, in which a majority of votes will suffice to sanction a conclusion. (2) In the twentieth century a generous spirit of human solidarity should be substituted for hatreds of race, religion and class. (3) Force should not interfere, in any way, to modify the natural groups formed in society. (4) The directness of purpose, which characterizes the solidity of the acts of the individual, applies equally to the family, to society and to nationalities. Anarchy is to a nation what disease is to an individual. Social reforms, coming from any direction, do not spring from antagonisms or force, but solely from the good will of all, aided by logic and reason. This assembly recognizes with pleasure the series of significant events which have occurred during the last year. Efforts have been multiplied to bring about the suppression of war. The solidity of this principle has been affirmed by cordial and friendly discussions, and spontaneous outbursts of enthusiasm, inspired by the most disinterested and truly humane sentiments, have occurred during the past few days among those, who, at the present time, are the highest ex-

ponents of world-wide authority." We presume that the allusions in the last paragraph refer, among others, to the consultations of the Powers at Algeciras, and, also, to the cordial relations existing between the Governments of England and France. Canadians are peculiarly and deeply interested in the establishment and perpetuation of such friendly relations.

**Lead Poisoning Caused by the Therapeutic Use of Lead Acetate.**—The susceptibility of some persons to lead poisoning almost amounts to an idiosyncrasy. Physicians should order that prescriptions containing lead shall not be refilled without further orders. In the issue of *American Medicine* for October 14th, 1905, Dr. Arneill, of Denver, reported the case of a coal miner, who had been treated by another physician with a preparation containing lead acetate. It was thought that this patient had taken from 2 dr. to 2½ dr. of lead acetate in the course of five or six weeks, the prescription having been refilled a number of times without the knowledge of the prescribing physician. Dr. Arneill found that this patient had colica pictorum; a typical blue line was present on the gums; no red cells were found containing basic granulations; the gastric juice contained no free hydrochloric acid, was of low total acidity, and contained lactic acid, but no Oppler-Boas bacilli. The colic was relieved after ten days' treatment. A case of colica pictorum resulting from the therapeutic employment of lead acetate is reported by Dr. W. Pepper, of Philadelphia, in a letter published in *American Medicine*, March 31st, 1906. The patient, a teamster by occupation, had used during the early summer of 1905 a preparation of lead acetate, each dose containing 1 gr., and he had taken more than three doses a day as he had severe diarrhea. In all, several drams of lead acetate had been taken, the prescription having been refilled several times. The total amount of lead acetate taken, in Dr. Pepper's opinion, was probably from 2 dr. to 2½ dr. in five or six weeks. The patient was admitted to the medical wards of the Philadelphia Hospital, Aug. 28th, 1905, on account of chronic diarrhea; he complained of pain in his abdomen and of tenesmus. The physical examination showed the heart and lungs to be normal, the abdomen to be tense and rigid but with no points of special tenderness. There was a marked blue line on the gums. The urine contained a few

light, granular casts, numerous hyaline casts and a small amount of albumen. The temperature, pulse and respiration were normal; the pain in the abdomen was very severe for a few days, and required local applications, as well as a general sedative. The diarrhea of which he had complained before entering the hospital was not present during the month he was in the ward, the record showing that he had but one stool a day in spite of the fact that magnesium sulphate was given him for the purpose of eliminating the lead. On September 15th the pain in the abdomen had disappeared and the patient was in fairly good condition. He showed no signs of paralysis. Examinations of his blood showed basic granulation of the red cells in large numbers. No gastric analysis was made. Histories of this kind reveal the reasons why preparations of lead, which were very freely employed, a generation ago, in diarrhea, dysentery, hemoptysis, hematemesis and uterine hemorrhage, are now supplanted by less dangerous astringents.

**The Amended Pharmacy Act (Ontario).**—A notable amendment to section 26 of the Pharmacy Act (Ontario) has been made by the Ontario Legislature. This Act now provides that a majority of the directors of a joint stock company, doing business as pharmacists, shall be registered pharmacists, and that one of such directors shall personally supervise the drug business in the company's establishment. The principal object achieved may be the closing of the drug business feature of the departmental stores, unless three druggists are employed to complete a board of five directors for every departmental store in which a drug business is carried on. Another important reform in the Act will be the virtual extinction of the enterprising, but unqualified, man, who used to masquerade as a pharmacist. He would start a drug store at an important city corner, where he would conduct the business of a druggist and chemist. He would incorporate a joint stock company, himself holding almost the entire stock, the balance of the stock being given to four relatives, thus making the required number to form a limited company. Thus equipped he would carry on the business of a pharmacist in defiance of the Pharmacy Act. According to the terms of the amended Act he will have to introduce a majority of pharmacists into his combination if he wishes to establish a limited company for

the sale of or keeping open shop for retailing, dispensing, compounding drugs, etc. J. J. C.

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**PERSONALS.**

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GRAHAM—BOYD—On Wednesday, May 2nd, at Bloor Street Baptist Church, by Rev. Mr. Freeman, Jane Eleanor, youngest daughter of Sir John Boyd, Chancellor of Ontario, to Dr. Joseph Graham, son of the late Dr. J. E. Graham.

DR. JOHN P. RUSSELL, late of Simcoe Street, Toronto, has been appointed surgeon in charge of the James Bay Railway extension from Parry Sound northwards. He is establishing four hospitals for the use of the 2,000 employees who will be under his care.

DR. HAMILL, of the Canadian Medical Exchange, informs us that there is no time in the year better than the present for physicians, who desire to sell their practices, to list the same with him, as a number of final students will graduate, and will be looking for places to locate. Physicians in need of a medical broker to sell their practices quietly and quickly should take advantage of Dr. Hamill's experience and opportunities.

ANOTHER SKYSCRAPER FOR TORONTO.—The Trustee Board of the Toronto General Hospital, following the example of the Traders' Bank downtown, have just erected for medical superintendent, Dr. J. N. E. Brown, within the grounds of the hospital, on Gerrard Street East, a second skyscraper. It consists of a one-story cottage with five or six rooms, covering in all an area of about 20x25 feet. How the genial doctor and his family (it is to be hoped he has none) can very well put in the warm summer months within the precincts of this spacious (?) residence, is just a little questionable.

# *News of the Month.*

## BRITISH MEDICAL ASSOCIATION.

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### A CLINICAL MUSEUM AT THE AUGUST MEETING.

Dr. Wm. Osler has suggested that a clinical museum, at which rare and interesting cases can be exhibited, should form one of the features at the meeting of the British Medical Association. The secretaries will be glad to hear of any cases that members would care to exhibit, and would be glad if members would communicate with them about such cases.

### SECTION OF MEDICINE.

President—Sir Thomas Barlow, Bart., K.C.V.O., M.D., London.

Vice-Presidents—Professor Alex. McPhedran, M.B., Toronto; Professor James Stewart, M.D., C.M., Montreal; Alex. Napier, M.D., Glasgow; Wm. Calwell, M.D., Belfast.

### PROVISIONAL PROGRAMME.

The following subjects have been selected for discussion:

Tuesday, August 21st.—A discussion on “Blood Pressure in Relation to Disease.” The subjects will be treated under the following headings: (*a*) “The Physiological Introduction,” by Dr. Dayson (Baltimore); (*b*) “Clinical Methods of Investigating Blood Pressure,” by Dr. G. A. Gibson (Edinburgh); (*c*) “Pathology and Therapeutics of Morbid Blood Pressure,” by Sir Wm. Broadbent. The following will also take part: Dr. MacKenzie (Burnley), Sir James Barr, Dr. Janeway (New York) and others.

Wednesday, August 22nd.—A joint discussion with the Physiology Section on “Over-Nutrition and Under-Nutrition, with Special Reference to Protein Metabolism,” to be opened by Prof. Crittenden, of Yale.

Thursday, August 23rd.—Papers on “Heart Block,” by Dr.

MacKenzie (Burnley), Dr. G. A. Gibson, Dr. Erlanger, Prof. Osler and others.

Friday, August 24th—Papers.

|                                       |              |
|---------------------------------------|--------------|
| ROBERT DAWSON RUDOLF, M.D., M.R.C.P., | } Hon. Secs. |
| 396 Bloor St. W., Toronto.            |              |
| JOHN TAYLOR FOTHERINGHAM, B.A., M.D., |              |
| 20 Wellesley St., Toronto.            |              |
| ROBERT HUTCHISON, M.D.,               | }            |
| 22 Queen Anne St., London, W.         |              |

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### ITEMS OF INTEREST.

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#### **Toronto Branch of H. K. Wampole & Co., Perth, Ont.—**

It is not generally known that H. K. Wampole & Co., who recently moved to Perth, Ont., where they built a splendid new laboratory, retained a fully equipped warehouse at No. 80 Bay Street, Toronto. It is on the second floor, and reached in a moment by the elevator. The firm keeps a full stock of their goods there, and any physician can receive the same promptly on telephoning to Main 3280.

**Presentation to Dean Geikie.**—In recognition of the fifty years' connection of Dean Geikie with medical education in Toronto, this year's graduating class of Trinity Medical College, who had not even had lectures from him, recently presented him with a beautiful ebony cane, gold mounted. The address expressed their warm appreciation for his intense loyalty to Trinity. The dean, in replying, thanked the students heartily for their kindness, and added that he still believed that amalgamation was a mistake. The presentation took place at Trinity Convocation Hall.

**Toronto Pathological Society.**—At the meeting of the Toronto Pathological Society, held on Saturday, April 28th, it was decided to change the night of meeting for the next year to the last Wednesday in the month. The following officers were elected for the coming term: President, Dr. J. A. Amyot; Vice-President, Dr. W. H. Pepler; Treasurer, Dr. C. J. Wagner; Corresponding Secretary, Dr. E. S. Ryerson; Recording Secretary, Dr. H. S. Hutchison.

#### **Proposed Competitive Examination for House Surgeonship.**—

A competitive examination for the purpose of choosing house surgeons of the General Hospital, instead of leaving the selection in the hands of the Medical Faculty of Toronto University, is a

change of the near future. The term of the appointment, it is suggested, instead of being one year, will be at least one and a half, and the men will come on duty in groups of four every four months instead of every six, as at present. These proposals, as recently made by Dr. Brown, Superintendent of the General Hospital, have, we understand, been endorsed already by the Board of Governors, and a conference with the University authorities will soon be held. Other recommendations made by Dr. Brown are that some radical separation be made between the private and semi-private wards, and the public ones, even so far as to having them in different buildings; also that a building for patients suffering from pulmonary consumption be erected as an experiment. Some of these ideas Dr. Brown received from his recent visit to New York hospitals.

**Convocation for Medical and Other Professions.**—Dr. John Gibson, B.A., of 24 Chancery Lane, London, and Upper Norwood, has for many years past been well known as a most successful tutor. He makes a specialty of the medical profession, and has passed a large number of students in that capacity through the London Matriculation, Preliminary Scientific, Conjoint, Army and Navy, Medical, etc., examinations. One of his pupils, Mr. Welch, took honors in no fewer than four subjects last June. Mr. Gibson also prepares candidates with great success for the bar, legal and accountancy examinations; also for Oxford, Cambridge and London universities, whilst some of the "plums" in the higher civil service—more especially in the student interpreter-ships for China, and the Levant, and the India police—have been secured by his pupils. Arrangements are made for both oral and correspondence tuition; the former may be by way of residence or non-residence. Residence pupils are received in Upper Norwood, a most healthy suburb of London, adjoining the Crystal Palace, and non-residence pupils at 24 Chancery Lane. Mr. Gibson brings out a monthly educational journal, called *The State Correspondent*, which gives up-to-date information on educational matters in general, and on civil service competitions in particular.



# *The Physician's Library.*

## BOOK REVIEWS.

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*Aids to Surgical Diagnosis.* By H. W. CARSON, F.R.C.S., Surgeon Tottenham Hospital. London: Bailliere, Tindall & Cox, 5 Henrietta Street, Covent Garden. 1906. Canadian agents: J. A. Carveth & Co., Toronto, Canada.

This "Aid to Surgical Diagnosis," a well-printed little manual, would be useful to a student preparing for an examination in surgery, the main points in the diagnosis and differential diagnosis of the more common surgical diseases being given. As a work of ready reference, it would be a useful pocket companion to a young surgeon.

J. J. C.

*Text-book of Psychiatry for Physicians and Students.* By LEONARDO BIANCHI, M.D., Professor of Clinical Psychiatry and Neuro-pathology in the Royal University of Naples, etc. Translated from the Italian by James H. MacDonald, M.B., Ch.B., Glasgow. London: Bailliere, Tindall & Cox, Covent Garden.

This admirable work will be read with pleasure by all interested in psychiatry. Coming as it does from a country in which some of the most marked discoveries in the finer structure of the nervous system have emanated, one naturally expects an adequate representation of the latest researches in the physiology and histology of the nerve centres, and this work of Professor Bianchi's fully justifies our expectations. The author fully realizes that the only solid foundation on which to build a complete text-book of psychiatry is the morphology and histology of the brain, and the recent advances in Italy in these branches has given him an opportunity which he readily seized, and to which he has devoted a large share of the early part of his work. But the work itself is chiefly clinical, and it is precisely the combination of the physiological with the clinical which makes the work so valuable. To those practitioners of several years' standing who may not have had the opportunity of study in psychiatric wards this work will be found most useful, since in the second part of it the author discusses the elementary symptoms of the disordered mind, thus enabling the family physician to detect mental disease

long before insanity has become manifest, and so warning him to take steps which will frequently save a mind from destruction. The chapters devoted to the Physio-Pathology, of Attention, of Memory, and of Ideation, are particularly interesting, and exhibit the advanced character of the entire work. The third part comprises the physiological conception of the individual psychopathies, and is naturally more voluminous than the other two. Every effort is made to simplify matters for the reader, and to make the book as practical as possible. Not only will this work be read with profit by the psychiatrist, but the general practitioner will find in its pages a most useful counsellor. The large number of illustrations are excellently done, and the entire book reflects every credit on its well-known publishers.

D. C. M.

1. *Compend of Obstetrics*, especially adapted to the use of Medical Students and Physicians. By HENRY G. LANDIS, A.M., M.D., late Professor of Obstetrics, and Diseases of Women in Starling Medical College. Revised and edited by William H. Wells, M.D., Demonstrator of Clinical Obstetrics in the Jefferson Medical College, Philadelphia; Gynecologist to the Mount Sinai Hospital, Philadelphia; late Adjunct Professor of Obstetrics and Diseases of Infancy in the Philadelphia Polyclinic; Fellow of the College of Physicians, and of the Gynecological Section of the same; Member of the Pediatric Society of Philadelphia, etc., etc. Eighth edition, illustrated. Philadelphia: P. Blakiston's Son & Co., 1012 Walnut St. 1906. Cloth, \$1.00.

This is a neat little compend of 227 pages, including an index. The fact that this work is in its eighth edition is ample guarantee of its popularity. It contains fifty-two illustrations, is arranged in the form of question and answer, and covers the subject of obstetrics in such a way that one may find almost any question on the subject answered concisely. It is a convenient book for review or pocket reference.

W. J. W.

*Progressive Medicine*, a Quarterly Digest of Advances, Discoveries, and Improvements in the Medical and Surgical Sciences. Edited by HOBART AMORY HARE, M.D., assisted by H. R. M. LANDIS, M.D. March 1st, 1906. Philadelphia and New York: Lea Brothers & Company. Six dollars per annum.

The contents of this number include reviews of recent literature of the surgery of the head, neck and thorax; infectious diseases, the diseases of children, rhinology, laryngology and otology.

Every article is interesting and is full of useful information. The reviews dealing with cerebellar abscess and tumors of the

brain are very full. Under epilepsy the statement occurs that in the surgical treatment of epilepsy the tendency to-day, both with neurologists and surgeons, is rather a conservative one.

Among other interesting subjects are the physiology and the surgery of the thyroid gland, and the surgical and X-ray treatment of carcinoma of the breast.

Under infectious diseases the transmission of disease by insects is discussed. The insects which transmit disease are the mosquito, the common house-fly, the fleas, the ticks, the bed-bugs, the tsetse fly and lice. Regarding diphtheria the statement is made that there is now left no one whose opinion is based on much experience, who is in doubt about the therapeutic value of the diphtheria antitoxin.

During the past year in the literature dealing with the micrococcus rheumaticus, the claims that his organism is the specific cause of articular rheumatism have been strengthened. Under diseases of children we have reviews of infant foods, breast-feeding and other methods of infant feeding.

Other articles on diseases of the nose, throat and ear conclude an exceedingly interesting and useful number. A. E.

*Clinical Applied Anatomy; or, The Anatomy of Medicine and Surgery.* By CHARLES R. BOY, M.D., B.S., B.Sc. (Lond.), M.R.C.P. (Lond.), F.R.C.S. (Eng.), and Lecturer in Applied Anatomy and Demonstrator of Morbid Anatomy, St. Thomas' Hospital; W. McAdam EECLES, M.S. (Lond.), F.R.C.S. (Eng.), Joint Lecturer in Anatomy and Demonstrator of Operative Surgery, St. Bartholomew's Hospital. London: J. & N. Churchill, publishers. Net, 12s. 6d. Illustrated by 45 plates, of which 12 are colored and 6 figure in the text.

Here is a new work and it is good. The title, however, may alarm the general practitioner or the student leaving college, and cause him to feel that the contents may be anatomically dry facts. He need have no such fear, for the aim of the work appears to be to indicate the important influence of anatomy on the incidence and progress of disease, disorder and injury of the human body. The whole book, in fact, is written from the practitioner's rather than the anatomist's point of view.

The student and the practitioner will find here the sequence of events well explained, and many a point that has embarrassed the doctor to explain for himself is fully elaborated.

There are chapters on Tuberculosis and Syphilis, Tumors, etc., as well as upon the specific fevers and other purely medical subjects; hence one may judge of the complete nature of the work, and all is written in a lucid, entertaining style. s.

*Reference Hand-book of the Diseases of Children*, for Students and Physicians. By PROF. DR. FERINAND FRUCHWALD, Chief of Clinic in the Vienna Polyclinic. Edited, with additions, by Thompson S. Wescott, M.D., Associate in Diseases of Children in the University of Pennsylvania. With 176 illustrations. Philadelphia and London: W. B. Saunders Company, 1906.

The above is somewhat of a departure from the ordinary form of the medical text-book. The classification is alphabetical with many cross references, which makes it very ready as a reference for the busy practitioner. The symptomatology is made a prominent feature of it, and prophylactic and dietetic treatment fully discussed. The therapeutic treatment gives large place to the newer synthetic preparations, whether wisely so is doubtful. The work is practical, full, without being verbose, and valuable as a reference hand-book.

A. R. 6.

*The Anesthetic Technique for Operations in the Nose and Throat*. By A. DE PRENDEVILLE, Senior Anesthetist to the London Throat Hospital. London: Henry J. Glasher, 1906. 3s. 6d. net.

A most practical and valuable booklet on this subject, treating fully of anesthesia by nitrous oxide, nitrous oxide followed by ether or chloroform, chloroform-ether mixture, ethyl chloride, ethyl chloride followed by ether, anesthesia in the dorsal, or in the upright position.

J. M.

*Nursing in the Acute Infectious Fevers*. By GEORGE P. PAUL, M.D., Assistant Visiting Physician and Adjunct Radiographer to the Samaritan Hospital, Troy, New York. 12mo of 200 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1906. Cloth, price \$1.00 net. Canadian agents: J. A. Carveth & Co., Limited, 434 Yonge St., Toronto.

It is evident to us that Dr. Paul has written his book on Fever Nursing especially for the nurse and with a knowledge of the subject that can have been gained only by intimate association with routine hospital work. The care and management of each fever has been accorded special attention, as these subjects are of particular interest to the nurse. The author has divided his work into three parts: The first treats of fevers in general; the second of each fever individually; the third deals with practical procedures and information necessary to the proper management of the various diseases discussed, such as antitoxins, bacteria, urine examinations, poisons and their antidotes, enemata, topical

applications, antiseptics, weights and measures, etc. Altogether, it will be found that Dr. Paul has rendered a valuable service, not only to the nursing, but also to the medical profession, as much of the information given is not without the frequent needs of the general practitioner.

W. A. W.

*Karl Grier.* By LOUIS TRACY, author of "The Wings of the Morning," etc. Toronto: McLeod & Allen.

In these days, when five out of every ten persons believe in a measure in hypnotism, second sight or clairvoyance, a well-told story about a young man who possessed "the sixth sense" ought to prove interesting reading for the holidays. Karl Grier's strange experiences or trances begin in childhood in India, and later he moves to London. Speaking of uncommon phenomena in the material world the author remarks: "Luckily, in these days men have learned to inquire into causes instead of falling flat on their faces in superstitious awe when they encounter some new trick of nature." Louis Tracy has learned to use his pen descriptively as picturing Karl Grier's face. He says: "Two little lines had developed between his eyebrows at the junction of nose and forehead. That is nature's way of minting her crude gold—just a touch of the finger of experience, no matter if the agony be of soul or body, and there is no machine can stamp its token more indelibly."

W. A. Y.

*Taber's Pocket Encyclopedic Medical Dictionary.* Edited by CLARENCE W. TABER, Associated Editor, Nicholas Senn, M.D., Ph.D., LL.D., C.M. Beautifully bound in full flexible leather, gold stamping, gilt edges, patent thumb index; pocket size, 6 1/4 x 4 1/4 inches, 420 pages, vocabulary words in bold black type, special subjects and sub-heads in italics and capitals, good strong paper, substantially sewed. Chicago, Ill.: C. W. Taber, publisher, 1531 Monachnock Building. Price, \$1.50.

This book combines all the features of a medical encyclopedia and dictionary. Encyclopedic definitions of all organs, parts and diseases; Anatomy, Physiology, Therapeutics, Toxicology, Surgery, Medical Electricity and kindred subjects. Diagnosis, symptoms, incubation periods, prognosis and treatment, special vocabularies of operations, instruments, electromedical terms, poisons and antidotes. Examinations and numerous tables. Medical laws of all states and territories. Special clinical charts of temperatures and symptoms. Cross indexed, any word found instantly whether name is known or not. Over 5,000 subjects encyclopedically treated.

*Gynecological Diagnosis.* A Manual for Students and Practitioners. By ARTHUR E. GILES, M.D., B.Sc. (Lond.), F.R.C.S. (Edin.), M.R.C.P. (Lond.), Gynecologist to the Tottenham Hospital; Surgeon to Out-patients Chelsea Hospital for Women. With thirty-five original illustrations. London: Bailliere, Tindall & Cox, 5 Henrietta Street, Covent Garden. 1906.

The author has given us an exceedingly useful work, and the original lines along which his investigations have tended cannot but commend them to every earnest thinker. The drawings and diagrams are essentially from the author's mechanical brain, and are of great assistance in his work. The diagnosis is carried up to a point to which any practitioner should be expected to go. Any one reading this book will be amply repaid for his trouble.

A. J. H.

*Sound and Rhythm.* By W. EDMUNDS. London: Bailliere, Tindall & Cox. 1906. Toronto: J. A. Carveth & Co. Pp. 96. 75 cents.

A great deal of time is spent in schools in teaching singing, but not much attention is given to the mechanism of sound and hearing. This most interesting little book strives to put in an intelligible manner the mysteries of sound, describing the nature of sound, how sound waves are produced and counted. This leads on to a short account of musical scales, organ pipes, time and movement, and, lastly, a brief description of the ear and the voice and their physiology.

J. M.

*The Dawn of a To-morrow.* By FRANCES HODGSON BURNETT. New York: Charles Scribner & Sons. Toronto: McLeod & Allen.

Frances Hodgson Burnett has never sealed a prettier story with her name: as ever, she is dramatic and intense in the beginning of her tale. It is of a worn-out earth-tired man, tempted to end everything with a pistol shot; despair is the only word life spells out for him. Amid the fog of life and nature in London he stumbles upon a waif of the streets, and strangely the light begins to creep in as this elfin girl meets, greets, cheers and shows him the under side of human existence, and through her strange environments and associates he learns the old lesson of the only reality, goodness, unselfishness and faith. In this part of her story the authoress shows the beauty of her thought, but true to art expresses it through the lips of nature, and by the voices of her children of the London slums. The one who fails to tuck this hour's reading into his grip this summer will miss much. The

man in the story says: "There is too much that is crying out aloud. A man such as I am—it has forced itself upon me—cannot leave such things and give himself to the dust." W. A. Y.

*The Examination of the Function of the Intestines by Means of the Test-Diet.* Its Application in Medical Practice and its Diagnostic and Therapeutic Value. By PROF. DR. ADOLF SCHMIDT, Physician-in-chief of the City Hospital, Friedrichstadt in Dresden. Authorized translation from the latest German edition, by Charles D. Aaron, M.D., Professor of Diseases of the Stomach and Intestines in the Detroit Post-Graduate School of Medicine; Clinical Professor of Gastro-enterology in the Detroit College of Medicine; Consulting Gastro-enterologist to Harper Hospital, etc. With frontispiece plate in colors. Crown octavo, 91 pages, extra cloth. Price, \$1.00 net. Philadelphia: F. A. Davis Company, Publishers, 1914-16 Cherry Street.

Examination of feces as generally carried out consists simply in inquiries as to amount, color, consistency and frequency of motions, with an occasional ocular inspection. The Test-Diet is an effort to place these examinations on a scientific basis, and with simple tests, which may be used by any physician. While there are many problems which will long remain unsolved, we feel this work marks a distinct advance, and heartily welcome it as an important aid in our gastro-intestinal work. W. J. W.

*International Clinics.* A quarterly of illustrated clinical lectures and especially prepared original articles on Treatment, Medicine, Surgery, Neurology, Pediatrics, Obstetrics, Gynecology, Orthopedics, Pathology, Dermatology, Ophthalmology, Otolology, Rhinology, Laryngology, Hygiene, and other topics of interest to students and practitioners by leading members of the medical profession throughout the world. Edited by A. O. J. KELLY, A.M., M.D., Philadelphia, U.S.A., with the collaboration of Wm. Osler, M.D., Oxford; John H. Musser, M.D., Philadelphia; Jas. Stewart, M.D., Montreal; J. B. Murphy, Chicago; A. McPhedran, M.D., Toronto; Thos. M. Rotch, M.D., Boston; John G. Clark, M.D., Philadelphia; Jas. G. Walsh, M.D., New York; J. W. Ballantyne, M.D., Edinburgh; John Harold, M.D., London; Edmund Landolt, M.D., Paris; Richard Kretz, M.D., Vienna, with regular correspondents in Montreal, London, Paris, Berlin, Vienna, Leipsic, Brussels and Carlsbad. Volume I., sixteenth series, 1906. Philadelphia and London: J. B. Lippincott Co. 1906.

Among the contributors to Volume I. of series sixteen, we find the names of Wm. Henry Battle, Surgeon to St. Mary's Hos-

pital, London; Jos. C. Bloodgood, Johns Hopkins University; G. Klemperer, Professor of Medicine, University of Berlin, Germany; David L. Edsall, Professor of Medicine, Assistant Professor of Medicine, University of Pennsylvania; Nicholas Senn, Professor of Surgery at Rush Medical College; Jas. Tyson, Professor of Medicine in the University of Pennsylvania, and Casey A. Wood, Professor of Clinical Ophthalmology in the University of Illinois, Chicago.

The volume consists of 17 lectures, covering treatment, medicine, surgery, obstetrics and pathology. It contains 8 colored plates, 20 or more ordinary plates, and 6 figures. The volume sells at \$2.00, and is splendid value.

*The Science and Art of Prescribing.* By E. H. COLBECK, B.A., M.D. (Cantab.), F.R.C.P. (Lond.), D.P.H. (Cantab.), Physician to Out-Patients of the City of London Hospital for Diseases of the Chest, Victoria Park, E.; Physician to the Metropolitan Dispensary; late House Physician St. Mary's Hospital, W., etc., etc.; and ARNOLD CHAPLIN, B.A., M.D. (Cantab.), F.R.C.P. (Lond.), Physician to Out-Patients at the City of London Hospital for Diseases of the Chest, Victoria Park, E.; Physician to the Metropolitan Dispensary, etc. Second edition, revised and enlarged. London: Henry Kimpton, 13 Fumival St., Holborn, E.C. 1906.

A useful collection of prescriptions taken from the different pharmacopeias of the London Hospitals, with notes on Pharmacy from the Extra Pharmacopeia and Other Formularies; also method of prescribing and administration of drugs. A. J. H.

*Experimental Psychology.* By, EDWARD BRADFORD TICHENER M.A. (Oxon.), Ph.D. (Leipzig). A Manual of Laboratory Practice. Vol. II. London and New York: Macmillan Co. Published in Canada by Morang & Co. Part I., Instructor's Manual, \$2.50. Part II., Student's Manual, \$1.40.

This work in two parts—for student and instructor—covers the field of quantitative experiment in the same minute and painstaking method evinced in the author's earlier work on qualitative experiment in Vol. I. His method are on similar lines to those of Müller, to whom he acknowledges his indebtedness, but on many points he has carried his researches further than this writer. The work is provided with every assistance to the student in the way of references, index, etc., and is dedicated to Delboeuf. It is a valuable manual in the pursuit of a study which, as Fechner says, is "not difficult in itself, but demanding patience, concentration, endurance and fidelity."

D. C. M.



*Saunders' Question Compend—Essentials of Genito-Urinary and Venereal Diseases.* By STARLING S. WILCOX, M.D., Professor of Genito-Urinary Diseases and Syphilology, Starling Medical College, Columbus, Ohio. 12mo of 313 pages, illustrated. Philadelphia and London: W. B. Saunders Company. 1906. Cloth, \$1.00 net. Canadian agents: J. A. Carveth & Co., Limited, 434 Yonge Street, Toronto.

This little work is a worthy addition to Saunders' Question Compend Series, a series that has reached a sale of over 265,000 copies. In this present work by Dr. Wilcox all genito-urinary and venereal diseases are fully detailed in the terse, direct language of question and answer, so that the student grasps immediately the point in question. Illustrations are freely used, adding much to the value of the book; and the large clinical experience of the author stamps it at once with accuracy and thoroughness. For the student there is none better; and the practitioner will find in it much that he is called upon every day to put into practice.

W. J. W.

*The Health of Our Children in the Colonies.* A Book for Mothers.

By DR. LILIAN AUSTIN ROBINSON. London, New York and Bombay: Longmans, Green & Co., 39 Paternoster Row.

The above, as its title page indicates, pretends not to a scientific treatise, but is written in simple vulgar English, for the education and guidance of parents and those in charge of the nursery. The occasion for it is the great infant mortality in British India and South Africa, of which the authoress had some years of personal experience. As such it is valuable, and can be heartily recommended as a useful guide and help to those in charge of the little ones when, perhaps, medical aid is not easily obtained.

A. R. G.

*Diseases of the Eye.* A Hand-book of Ophthalmic Practice. By G. E. DESCHWEINITZ, M.D., Professor of Ophthalmology in the University of Pennsylvania. Fifth edition, revised and enlarged. Octavo of 894 pages, 313 text-cuts and 6 chromolithographic plates. Philadelphia and London: W. B. Saunders Company. Canadian agents: J. A. Carveth & Co., 434 Yonge Street, Toronto. 1906. Cloth, \$5.00 net; half morocco, \$6.00 net.

The fifth edition of this well-known book on the eye is an improvement of an always excellent work. The first edition appeared in 1892. Greater clinical experience has led to an expression of personal opinion on subjects which in former editions were dealt with on the authority of others.

Many new subjects have been introduced, such as X-ray treat-

ment of epithelioma, of trachoma, forms of keratitis punctata, Worth's amblyoscope, stovaine and alypine, the new anesthetics; Haab's method for removal of foreign bodies, and Sweet's X-ray method of localizing them. The illustrations, which have always been a feature, are increased by thirty-three cuts. J. M.

*A Text-book of Materia Medica, Therapeutics and Pharmacology.*

By GEORGE F. BUTLER, Ph.G., M.D., Associate Professor of Therapeutics in the College of Physicians and Surgeons, Chicago. Fifth edition, thoroughly revised by Smith Ely Jelliffe, M.D., Ph.D., Professor of Pharmacognosy and Instructor in Materia Medica and Therapeutics in Columbia University (College of Physicians and Surgeons), New York. Octavo of 694 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1906. Cloth, \$4.00 net; half morocco, \$5.00 net. Canadian agents: J. A. Carveth & Co., 434 Yonge Street, Toronto.

Dr. Butler has thoroughly revised and rewritten this fifth edition to accord with the new pharmacopeia. Thoroughly up-to-date, with all obsolete matter eliminated, and the toxicologic and therapeutic effects of the newer compounds thoroughly arranged, no more painstaking volume on this subject has ever been written, and it is a pleasure to recommend such an up-to-date work.

A. J. H.

*The Physical Examination of Infants and Young Children.* By

Theron Wendell Kilmer, M.D., Adjunct Attending Pediatricist to the Sydenham Hospital; Instructor in Pediatrics in the New York Polyclinic Medical School and Hospital, New York; Attending Physician to the Summer Home of St. Giles, Garden City, New York. Illustrated with 59 half-tone engravings. Philadelphia: F. A. Davis Company, Publishers.

The above little book, 86 pages in all, is full of valuable hints and reminders, instruction and demonstration. Any practitioner will be more than repaid by its perusal. It is beautifully illustrated, concisely written and intensely practical, and is a book one will read with pleasure and satisfaction.

A. R. G.

*A Manual and Atlas of Dissection.* By SIMON MUNRO YUTZY,

M.D., Instructor in Osteology and Demonstrator of Anatomy, in the University of Michigan. Three hundred and fourteen illustrations. Philadelphia: P. Blakiston's Son & Co.

This is a student's guide to be used in the dissecting room. It corresponds somewhat to the "Guides for Students" distributed in the Anatomical Department in the University of Toronto.

telling how to approach each dissection and numerating the structures to be looked for. The book is profusely illustrated with figures taken principally from Morris' & Holden's Anatomy.

s.

Messrs. Archibald, Constable & Co. will very shortly publish "Recent Advances in the Physiology of Digestion," by Prof. E. H. Starling, M.D., F.R.S., Jodrell Professor of Physiology. The book contains illustrations and diagrams. The author expresses a hope in his preface that this volume may serve to interest a large audience of students and medical men in the growing importance of these subjects, and that it may give them an idea of the aims and objects of this particular branch of physiological research.

Announcement is made by Wm. Wood & Co., New York, of the publication of a new work on the science and art of surgery, to appear in eight royal octavo volumes, profusely illustrated, and to be entitled "American Practice of Surgery."

Although other attempts have been made in recent years to publish a book which would faithfully record the part taken by Americans in advancing the science and art of surgery, and which should give an authoritative picture of surgical practice as it is carried on to-day by the recognized masters of the art, time has shown, as it seems to us, that all these efforts were made somewhat prematurely. It is our present belief that only within the last two or three years has the practice of surgery in this country reached such a mature stage of development that one might reasonably expect to secure for the contemplated book the desired character of authoritativeness, and also might anticipate that this character would possess some degree of permanence. It is with these ideas in mind that we have decided to undertake the publication of the "American Practice of Surgery"; and, as the first step, we have commissioned Dr. Joseph D. Bryant and Dr. Albert H. Buck, of this city, to act as the editors of this important treatise. These gentlemen are so well known to the profession at large—the one as a teacher and author in surgery of established repute, the other as an editor of wide experience—that we do not need to say anything farther in regard to their fitness to be at the head of an enterprise of this nature. A survey of the list of writers whom they have invited to contribute the articles of which this great work is to be composed, affords convincing evidence that the men selected are among the very best to whom such responsible tasks could be entrusted.

We have had the present scheme under consideration for several years and have become more and more convinced, as the time for carrying it into effect approached, that it would not be practicable to cover the entire range of surgery, in a fairly thorough fashion, within the limits of a series of only five or six volumes

of the usual cyclopaedic form. After very careful consideration, and with the full approval of the editors, we have decided to publish the work in eight royal octavo volumes; a total of more than six thousand pages. Within these limits we believe that it will be possible for our contributors to set forth the results of their extensive experience with such wealth of detail as to render the new "Surgery" simply indispensable to their less experienced professional brethren; and in these days of specialized work the most experienced surgeons must recognize the fact that even they are at times in need of additional information in many fields of surgical work.

The material contained in "American Practice of Surgery" will be entirely original, written for this work alone, and naturally embracing much that has never before been published.

No foreign writers have been invited to take part in the work, and it will, for this reason, be distinctively American in character.

Illustrations in medical works are of the greatest possible assistance when wisely employed to elucidate the author's meaning, and we propose to introduce them liberally in this work. As regards execution and value they will be of the highest character.

The work will be printed from plates made from specially cast type, and printed upon paper of a quality to combine perfect press-work with ease in reading.

#### PAMPHLETS, REPORTS, ETC., RECEIVED.

Eighth Annual Report of the National Sanitarium Association for 1904-5, issued from the Secretary's office, National Sanitarium Association, 28 Adelaide Street West, Toronto, Canada.

Report relating to the Registration of Births, Marriages and Deaths, in the Province of Ontario for the year ending 31st December, 1903. Printed by order of the Legislative Assembly of Ontario, Toronto. Printed and published by L. K. Cameron, Printer to the King's Most Excellent Majesty. 1905.

"Trachoma (Granular Conjunctivitis)," by Robert Reid Rentoul, Doctor of Medicine, late Member of the General Council of Medical Education for the United Kingdom; Member of the Royal College of Surgeons, England; Licentiate of the Royal College of Physicians, Edinburgh; Hon. Member of the Manchester Medico-Ethical Association; Member of the Society for the Study of Inebriety; author of "Woman's Health," "Causes and Treatment of Abortion," "Medical Charity Reform," "Proposed Sterilization of Certain Mental and Physical Degenerates;" Witness before two Select Committees of the House of Commons upon Death Registration and Medicines. 2s. net. Published by Cornish & Sons, 37 Lord Street, Liverpool. 1904.











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